



OMB Approval Number

National Aeronautics and Space Administration

supported through

**Education Division
NASA Headquarters**

managed by

**LEARNERS Initiative
NASA Goddard Space Flight Center**

FY 2003 NASA COOPERATIVE AGREEMENT NOTICE (CAN)

(CAN 03 LTP-01)

Leading Educators to Applications, Research and NASA- related Educational Resources in Science II (LEARNERS II)

Release Date:	December 16, 2003
Letters of Intent Due:	January 15, 2004
Proposals Due:	March 15, 2004

Code F, NASA Goddard Space Flight Center
Greenbelt, MD 20771

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1.0 Overview

1.1 NASA VISION

To improve life here,
To extend life to there,
To find life beyond

1.2 NASA MISSION

To understand and protect our home planet
To explore the Universe and search for life
To inspire the next generation of explorers
...as only NASA can

1.3 NASA EDUCATION PRIORITIES

- Motivating K – 16+ students to pursue careers in science, math and engineering
- Providing educators with unique teaching tools and compelling teaching experiences
- Seeking to ensure that we are investing the taxpayer's resources wisely
- Engaging minority and underrepresented students, educators, and researchers in NASA's education program

1.4 LEARNING TECHNOLOGIES PROJECT

The NASA Learning Technologies Project (LTP) is NASA's educational technology incubator. The Learning Technologies Project is part of the Educational Technology Program of NASA's Education Division (see NASA Implementation Plan for Education at http://www.hq.nasa.gov/education/ed_implmt_plan/exec.htm). The Learning Technologies Project funds activities that incorporate NASA content with revolutionary technologies or innovative use of entrenched technologies to enhance education in the areas of math and science. NASA content refers to information that will highlight NASA's personnel, facilities, and missions from one or more of the five Enterprises. To accomplish this, the LTP couples the entrepreneurial talents of the education professionals, commercial industry, academia, non-profit enterprises, educational foundations, and NASA to develop educational technology that engages and educates learners who may have diverse backgrounds, characteristics, and abilities.

The purpose of this **LEARNERS (Leading Educators to Applications, Research, & NASA-related Educational Resources in Science)** Cooperative Agreement Notice (CAN) is to help focus research and development in education that highlight NASA's scientific, engineering, and technology contributions. In order to achieve this objective, LEARNERS will support the development of remote experiences of NASA missions through virtual reality using computer-based

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interactive environments, and where possible, maximize the delivery of these experiences through sensory-rich immersive technology.

1.5 LTP VISION

Support the widest possible dissemination of educational technology that engages and immerses the learner in compelling scientific and mathematical concepts utilizing NASA data.

1.6 LTP MISSION

Efficiently develop world-class educational products that are poised for the widest possible market diffusion, that inspire and educate, that use innovative methods or emerging technologies, and that clearly address educational standards utilizing NASA data. These products must account for diverse learning environments when applicable and possible.

1.7 LTP GOALS

- Cultivate and develop innovative technology solutions that enhance the educational experience with no additional burden to teachers.
- Research and develop an engaging educational experience that uses immersive technologies and NASA data to increase science and math literacy.
- Capitalize on NASA Enterprise's research and development resources that showcase their technologies in a manner that stimulates further educational and scientific applications of those technologies.
- Nurture educational partnership agreements and facilitate further entrepreneurial enterprise and commercial opportunities for the educational community.
- Contribute to a richly evolving and highly sustainable release of NASA educational products that are replicable and scaleable within the educational community.
- Promote exposure of NASA-developed technology, and research and development activities into the learning environment.

2.0 Objective of this Cooperative Agreement Notice (CAN)

2.1 SCOPE OF TECHNOLOGY

Products should leverage NASA-unique content of one or more of the five NASA Enterprises: Aerospace Technology, Earth Science, Human Space Flight, Biological and Physical Research, and Space Science.

LEARNERS' seeks innovative educational technology products for delivery of NASA content directly to learners via various venues including stand-alone and internet-based computers, the classroom, tech museums, science centers, and

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other learning environments. Recipients shall incorporate current research on teaching and learning with technology to achieve meaningful utilization of innovative and immersive technology in the learning environment. LEARNERS seeks products that enhance the ability to represent NASA missions and activities as virtual experiences, engaging and immersing the learner in as much of a sensory experience as relates to an effective learning experience.

2.2 PARTNERSHIP APPROACH

Any qualified individual or group including, but not limited to, academia, industry, private and public organizations, and the government may propose. NASA specifically encourages team efforts that have a demonstrated understanding of effective pedagogical methods and a track record for implementing the proposed technology. This combination implies a successful mix of the education community, the education industry, academia, government, and commercial industry. Strong partnerships leverage ongoing developments intended to maximize pedagogical impact and maximum diffusion of engaging educational technology products. In addition, recipients shall demonstrate alliance with NASA Enterprise-based programs.

Note: LEARNERS is intended to provide tools for the learning community and is not intended to conduct information technology research and development.

2.3 STATEMENT OF NASA ROLE IN THE COOPERATIVE AGREEMENT

NASA will have substantial involvement in the activity as described below:

- a. Participation through its enterprises, as appropriate, in the formulation of strategies, milestone definition, the development of enhanced products using NASA content, and assessing the impact of the product;
- b. Facilitate access to any publicly available NASA resources that may be of use to a particular vendor.
- c. Coordination of project activities with other NASA education activities within NASA and within and across enterprises.

It is expected that NASA will have substantial involvement in the Cooperative Agreement: the NASA LEARNERS Team will maintain close contact with the development teams to assist in the development of an enhanced product using NASA content. The LEARNERS II CAN seeks to insure strong alignment between education projects and NASA's Enterprises. Proposed activities must be linked with one or more of NASA's Enterprises or mission(s) within an Enterprise. Please contact info@learners.gsfc.nasa.gov to be put in touch with an appropriate Enterprise representative. Enterprise representatives will also have substantial participation in the review process and insure that alignment with Enterprise missions and goals is maintained throughout the life of the Cooperative Agreement.

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2.4 MILESTONES AND REPORTS

Recipients shall propose and implement a schedule that identifies major project tasks and milestones. Projects are expected to identify a set of clearly defined metrics to measure progress toward one or more of the NASA Education Priorities).

To ensure collection of systemic evaluation data on each project, basic reporting is required:

1. Successful applicants shall report on these metrics according to the following schedule:

Each fiscal quarter, provide financial reports and updates on project activities.

A quarterly review of a project shall be held via videoconferencing or teleconferencing, with the LEARNERS Manager, Learning Technologies Project Manager, the Educational Technology Program Officer, and other personnel, as invited by Educational Technology Program Management.

An annual summary report and demonstration of the product is required. All projects shall be reviewed annually to determine their progress measured against their milestones.

2. To foster communication within the program, the following participation is required:

1. Learning Technologies Investigators kick-off meeting.
2. Annual NASA Education Technology Program conference held in Spring, generally between months of April – May.
3. Training workshops for NASA internal dissemination channels, including but not limited to the Education Resource Center Network and the Aerospace Education Specialists Program.

3.0 Performance Period

A cooperative agreement awarded as a result of this CAN will provide for a basic performance period of 1 year with a possible 1-year extension period, bringing the total performance period to a potential 2-year term. The Government will assess the progress of the research efforts during the first year of performance. Based on this assessment, the Government may elect to extend the cooperative agreement for an additional 1-year.

4.0 Contributions

Educational and non-profit organizations recipients of cooperative agreements are not required to cost share; however, NASA may accept cost sharing when voluntarily offered by educational and non-profit organizations. The commercial recipient is expected to contribute at least 50 percent of the total resources necessary to accomplish this cooperative agreement effort.

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Recipient contributions may be cash, non-cash (in-kind) or both. Non-cash or in-kind contributions may be in the form of personnel resources (where cost accounting methods allow accumulation of such costs), real property, equipment, supplies and other expendable property, and the value of goods and services directly benefiting and specifically identifiable to the project or program.

This CAN describes NASA's substantial involvement to cooperative agreement recipients. As part of its proposal package, the recipient may also identify additional non-cash or in-kind resources it wishes NASA to contribute.

Cost sharing for commercial recipients is addressed in paragraph 1274.204 (b) and for educational institutions and other non-profit organizations are addressed in paragraph 1260.123 of the NASA Grant and Cooperative Agreement Handbook.

The NASA Grant and Cooperative Agreement Handbook can be accessed at:
<http://genesis.gsfc.nasa.gov/grants/grants.htm#GrantsForms>

5.0 Model Cooperative Agreement

Two model cooperative agreements are provided hereto as appendices to this CAN. GSFC intends to award a cooperative agreement that maintains the spirit of these documents. These documents contain passages from the NASA Grants and Cooperative Agreement Handbook as applicable for Agreements with Educational and Non-Profit recipients (Appendix E) and Agreements for Commercial Firm recipients (Appendix F). It is NASA policy that, in general, research with foreign organizations will not be conducted through grants or cooperative agreements, but instead will be accomplished on a no-exchange-of-funds basis. In these cases, NASA enters into agreements undertaking projects of international scientific collaboration. NASA policy on performing research with foreign organizations on a no-exchange-of-funds basis is set forth at NFS 1835.016-70.

6.0 Proposal Instructions

6.1 GENERAL PROPOSAL GUIDELINES

In order to plan for a timely and efficient peer review process, a Letter of Intent to Propose is required to be submitted. Instructions for submission of a Letter of Intent to Propose are provided as Appendix G.

All questions regarding this Cooperative Agreement Notice shall be submitted in writing by the date found in Section 1 entitled, "Schedule" and addressed to:

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NASA Goddard Space Flight Center
Attn: Lynne Hoppel/Code 210.Y
Earth Sciences Procurement Office
Greenbelt Road, Bldg. 28, Rm. W115
Greenbelt, MD 20771

Lynne.C.Hoppel@nasa.gov

Offerors will submit by the due date an original proposal plus the appropriate completed model CAN to the required mailing address/external as follows below. Additionally, the Offeror must submit two electronic/software versions (MS Office compatible or Portable Document Format) of its proposal. The version should be text only. One of the two copies shall be identified as back-up.

External Marking of Proposal Package(s)

All proposal packages must be closed and sealed.

The required mailing address and external marking for proposals is as follows:

"Goddard Space Flight Center
Greenbelt, MD 20771
Building 16W—Shipping and Receiving Dock
CAN Number (CAN-03-LTP-01)
Attn: L.C. Hoppel
Building 25, Room S-35

PROPOSAL--DELIVER UNOPENED"

Suggested additional marking if delivery is made by a commercial delivery service:

"COMMERCIAL DELIVERY PERSONNEL: THIS PROPOSAL MUST BE DELIVERED TO THE DOCK MASTER, BUILDING 16W SHIPPING AND RECEIVING DOCK, NO LATER THAN (OFFEROR—ENTER DATE AND TIME)."

Designated Receiving Office

The designated receiving office for proposals is the Shipping and Receiving Dock, Building 16W, Goddard Space Flight Center, which must be accessed from Soil Conservation Road, north from Greenbelt Road. Proposals must be received at the designated receiving office **no later than the date and time stated on the solicitation face page.**

The Building 16W Shipping and Receiving dock is open from 7:30AM to 3:30PM, Monday through Friday, except Government holidays. Contractor

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personnel conduct the GSFC receiving function, which includes mailroom operations. Proposals will be marked with the date and time of receipt, subjected to security screening, secured, and delivered unopened to the Agreement Officer.

There is public access to the Building 16W Shipping and Receiving Dock. GSFC passes, badges, escorts, etc. are not required for access to the receiving dock.

Methods of Proposal Delivery

There are three suggested methods of delivery to the designated proposal receiving office:

U.S. Postal Service Express Mail
Commercial Delivery Service
Delivery by company employee or other individual agent

Regardless of the method of delivery chosen, the offeror is responsible for delivery of the proposal to the designated receiving office no later than the date and time stated on the face page of the solicitation.

Also, Offerors will submit by the due date a second original plus 5 paper copies of the proposal to:

Attn: Kenneth M. Whipp
LEARNERS CAN II
NASA Peer Review Services
500 E. St., SW, Suite 200
Washington, DC 20024

TWO proposal cover pages are required as part of the proposal. The first is a **hard copy** (see below for instructions on how to acquire the proposal hardcopy from the online system) that must be signed by the Principal Investigator and an official by title of the investigator's organization who is authorized to commit the organization. This authorizing signature also certifies that the proposing institution has read and is in compliance with the required certifications printed in full. This page will not be counted against the page limit of the proposal.

The second proposal cover page must be submitted **electronically** to the SYS-EYFUS Web site located at <http://proposals.hq.nasa.gov/>. If the respondent has submitted an electronic Notice of Intent (Appendix G) to SYS-EYFUS, the same user UserID and password can be used to complete the electronic proposal cover page. If the respondent obtained a User ID and password in the process of submitting a proposal for a previous research opportunity announcement, the same user UserID and password can be used to complete the electronic proposal

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cover page in response to this research opportunity announcement. Be sure to click on "Edit Personal Information" if any of your correspondence information in SYS-EYFUS is not current.

If you do not have a SYS-EYFUS UserID or password, you may obtain one electronically by going to <http://proposals.hq.nasa.gov> and performing the following steps:

- Click the hyperlink for **new user, which** will take you to the Personal Information Search Page.
- Enter your first and last name. SYS-EYFUS will **search** for your record information in the SYS-EYFUS database.
- Confirm your personal information by **choosing** the record displayed.
- Select **continue**, and a User ID and password will be e-mailed to you.
- Once you receive your User ID and Password, **login** to the SYS-EYFUS Web site and follow the instructions for **New Proposal Cover Page**.

Respondents without access to the Web or who experience difficulty in using this site may contact the Help Desk at proposals@hq.nasa.gov (or call 202.479.9376) for assistance. After you have submitted your notice of intent or proposal cover page electronically, if you are unsure if it has been successfully submitted, do not re-submit. Please call the Help Desk. They will be able to promptly tell you if your submission has been received. Please note that submission of the electronic cover page does not satisfy the deadline for proposal submission.

Proposals received in response to this CAN will be used only for evaluation purposes. NASA does not allow a proposal, the contents of which are not available without restriction from another source, or any unique idea submitted in response to a CAN to be used as the basis of a solicitation or in negotiation with other organizations, nor is a pre-award synopsis published for individual proposals.

A solicited proposal that results in a NASA award becomes part of the record of that transaction and may be available to the public on specific request; however, information or material that NASA and the recipient mutually agree to be of a privileged nature will be held in confidence to the extent permitted by law, including the Freedom of Information Act.

CANs contain programmatic information and certain requirements that apply only to proposals prepared in response to that particular notice. These instructions contain the general proposal preparation information that applies to responses to all CANs.

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NASA may accept proposals without discussion; hence, proposals should initially be as complete as possible and be submitted on the offeror's most favorable terms.

To be considered for award, a submission must, at a minimum, present a specific project within the areas delineated by the CAN; contain sufficient technical and cost information to permit a meaningful evaluation; be signed by an official authorized to legally bind the submitting organization; and not merely offer to perform standard services or to just provide computer facilities or services.

If substantial collaborations with other institutions are intended, include summary statements identifying each endorsing partner, their contribution, and the name and signature of the responsible officer or manager at the institution. Summary statements are limited to two pages total and will not count towards the page limitations.

Total funding for this CAN is \$750,000 per year to be divided among the cooperative agreement recipients. There is also the possibility of an additional \$50,000.00 to be available for the second performance year.

6.2 TECHNICAL PROPOSAL GUIDELINES

6.2.1 PILLARS

All proposals must demonstrate relevance to one or more of three LTP Pillars:

1. Pillar One: Interactive Environments (Software).

Integration of NASA science, engineering, and technology into a high-resolution *interactive* experience, using (only as appropriate or capable) 3D video, spatial and stereo sound, haptic interfaces, olfactory emitters, or other forms of sensory transmission media.

2. Pillar Two: Virtual Presence (Hardware).

High resolution, reality-based virtual worlds, using (only as appropriate or capable) 3D video, spatial and stereo sound, haptic interfaces, olfactory emitters, or other forms of sensory transmission media.

3. Pillar Three: Immersive Technology Experience (Integration of Pillars I & II).

Computer platforms, as stand-alone *or* linked to *high-speed* networks, that deliver an engaging, interactive educational experience using (only as appropriate or capable) 3D video, spatial and stereo sound, haptic interfaces, olfactory emitters, or other forms of sensory transmission media combined with NASA content to provide students with a complete educational experience based on National Education Standards.

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A recent benchmarking study conducted by NASA's Learning Technologies Project provides a partial review of the current technology available to support the Pillar Three focus. The study should not be used as a guide but only for general informational purposes and can be accessed at the Learning Technologies Project website <http://learn.arc.nasa.gov/ltp2003/benchmark/>.

Two other important benchmarking studies performed by NASA's Classroom of the Future and NASA's Spacelink can be found at the same location. These benchmarking studies are referenced herein for information purposes only.

6.2.2 GENERAL TECHNOLOGY GUIDELINES

Proposals must address the Learning Technology Project's Immersive Technology Theme, tools that give educational technology the richest opportunity for delivering an interactive, virtual, and immersive experience to the widest possible number of learners and therefore should use one or more of the following technologies, or other applicable technologies:

- 3D video and spatial sound
- 3D virtual reality
- Meaningful interaction with an intelligent (i.e., responsive to user) 3D virtual environment
- Interactive 3D representations of NASA mission operations
- Video stitching, 3D graphics, and 3D streaming capability
- 3D video cameras with live 3D streaming capabilities
- Advanced and intelligent 3D streaming (i.e., compressed transmission and resolution delivery dependent on the user's system)
- Innovative internet utilization (i.e., sophisticated query of very large data sets so that data request intelligently scopes and scales data set for reasonable transmittal)
- Stereo, spatial sound, and translatable sound capability
- Haptic and olfactory data acquisition and broadcast capability
- Remote internet reception or broadcast capability

Proposed technologies should be tied directly to NASA content, such as data sets, models, facilities, operations, personnel, or environments.

Recipients shall identify a set of clearly defined metrics to measure progress toward one or more of the NASA Education Priorities).

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6.2.3 SPECIFIC ELEMENTS OF PROPOSED OBJECTIVE

I. Project Purpose

- a) Define a specific educational need or problem.
- b) Propose a credible solution that employs the technologies discussed in this Cooperative Agreement Notice (CAN).
- c) Identify realistic, measurable outcomes that you expect to result from carrying out the project.
- d) Target underserved communities/audiences.
- e) Address accessibility for learners with special needs.

II. Innovation

- a) Describe, in detail, aspects of the project that are unusual or innovative.
- b) Place efforts in a national context by comparing and contrasting the project to other efforts or projects in the field.

III. Diffusion Potential

- a) Discuss the product diffusion potential and its approach to effectively reach the widest possible market, in the short term and the long term.
- b) Highlight elements of the product that enable its replication, evolution, and basis for the educational community's interest in it.
- c) Discuss how prevalent the educational problem or need that you intend to address is to the educational community and how you intend to address it.
- d) Highlight the cost-effectiveness and simplicity of your approach versus other alternatives.
- e) Highlight those aspects of the project that are improvements upon existing approaches.
- f) Discuss the extent to which the product will be aligned with national educational standards. Usage scenarios depicting potential applications are encouraged.
- g) Discuss plans for disseminating the product.

IV. Project Feasibility

- a) Historically underserved communities must be addressed by offerors. Additionally, accessibility and usability for learners with special needs must be addressed. The Accessibility and Usability Guidelines are available on the WWW address as provided elsewhere in this document.

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- b) In addition, offerors should demonstrate alliance with NASA enterprise-based programs. Documentation of successful dissemination of existing products by partnership participants is crucial.
- c) Discuss the technical approach for selecting this particular technology, and the rationale for this particular educational experience with emphasis on how the various components will be organized, and work together.
- d) Outline applicant qualifications and evidence that the applicant team has the ability to deal effectively with the technical complexity, educational pedagogy, and the organizational challenges associated with managing the project.
- e) Present an implementation schedule that identifies major project tasks and milestones.
- f) Outline plans for protecting the privacy, confidentiality, and accessibility of the end users and beneficiaries of the project.
- g) Present a plan that includes a discussion of anticipated ongoing expenses and potential sources of funds to initially support and then to sustain the project.
- h) Prepare a probabilistic risk assessment of proposal. State the risk(s) in terms of condition and consequence(s); capture the context of the risk; e.g., what, when, where, how, and why. Evaluate risk probability, impact/severity, and timeframe (when action needs to be taken); classify/group with similar/related risks; and prioritize. Assign responsibility, determine approach (research, accept, mitigate, or monitor); determine if risk will be mitigated, define mitigation level, and goal. Describe how to execute plan.

V. Partnerships

- a) Present clear discussion of who your partners will be, what their respective roles in the project will be; what benefits each expects to receive, and what specific contributions each partner will make to the project in the form of financial support, equipment, personnel, or other resources e.g., cost sharing.
- b) Outline the extent to which the partnership represents a mix of the educational community, the education industry, academia, government, and commercial industry.
- c) Clearly state anticipated ownership and NASA utilization of product in its education programs.

VI. Evaluation

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- a) Present a clearly defined plan to evaluate the degree to which project achieves project outcomes including dispersion and a successful learning experience.
- b) Validate and verify performance goals and outcomes used as the basics of your overall design, methodology, and intent.
- c) Provide 3 references where comparable research and development has been completed by the offeror. Provide the name, telephone number, e-mail address, and project title for each reference.

6.2.4 PROTOTYPES

Rapidly changing technologies require rapid prototyping and development of products. To address the extremely short time-to-market for information technology products, proposals submitted under LEARNERS II will consider products for which prototypes are available or product development or substantial enhancements to existing products. These products must give educational technology the richest opportunity for delivering an interactive, virtual, and immersive experience to the widest possible number of learners. Particular interest will be in products that serve a sustainable paradigm, that is they can readily evolve additional features and increased functionality. The proposal must describe how the proposed product or prototype would be modified to meet the LEARNERS objective.

6.2.5 DISSEMINATION STRATEGY

Proposals should clearly identify their strategy to maximize dissemination of the resulting products. Additionally, documentation of successful dissemination of existing products by partnership participants is crucial. In addition to external strategies, offeror should use existing NASA dissemination systems, including, but not limited to:

NASA Classroom of the Future:

Further educational research within relevant learning environment and/or continued evolution of prototype within the Technology Readiness Level continuum. <http://www.cotf.edu/>

NASA Spacelink:

Electronically promotes and host mature technologies, with the possibility of developing online tutorials to support explanation of product usage. <http://spacelink.nasa.gov/>

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Educator Resource Center Network and Aerospace Education Specialists:

Support training of educators on mature products. <http://education.nasa.gov/ercn/>

Enterprises' Educational Product Review and Dissemination Processes:

Earth Science Enterprise

<http://www.earth.nasa.gov/education/esereview/index.html>

Space Science Enterprise

<http://www.strategies.org/SpaceScienceReview.html>

Successful proposals will include training for NASA's internal dissemination channels, including, but not limited to the Educator Resource Center Network and Aerospace Education Specialists. Products should be aligned with Enterprise Evaluation Criteria (see e.g. criteria published by the Earth Science and Space Science Enterprises at WWW address above).

6.2.6 DATA RIGHTS

The provision § 1274.905 and 1260.30 entitled, "Rights in Data" requires the Data developed under any Cooperative Agreement will be maintained in confidence for a period of time which requires to be identified. Offerors are requested to advise the Government in their proposal the length of time after development of the data that the information can be disclosed and used by the Government and its contractors (under suitable protective conditions).

Additionally, Offerors shall insert the appropriate purpose; [for example: experimental; evaluation; research; development, etc.] by or on behalf of the Government during that period.

6.3 BUDGET GUIDELINES

The proposed budget should include the distribution of funds to various milestones proposed over a one-year period with an option for one additional year. Include the evidence of cost sharing or institutional commitment and its use. Include separate cost estimates for salaries and wages; fringe benefits; equipment; expendable materials and supplies; services; domestic and foreign travel; ADP expenses; publication or page charges; consultants; subcontracts; other miscellaneous identifiable direct costs; and indirect costs. List salaries and wages in appropriate organizational categories (e.g., principal investigator, other scientific and engineering professionals, graduate students, research assistants, and technicians and other non-professional personnel).

Explanatory notes should accompany the budget summary to provide identification and estimated cost of major capital equipment items to be acquired; purpose and estimated number and lengths of trips planned; basis for indirect cost

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computation (including date of most recent negotiation and cognizant agency point of contact, phone number and email address); and clarification of other items in the cost proposal that are not self-evident. List estimated expenses as yearly requirements by major work phases.

Allowable costs are governed by FAR Part 31 and the NASA FAR Supplement Part 1831 (and OMB Circulars A-21 for educational institutions and A-122 for nonprofit organizations).

6.4 PROPOSAL FORMAT

The proposal shall **not exceed 30 pages**. Standard 8 ½ x 11-inch sheets of paper, using no less than 10-point font should be used.

The following table shows guidelines for each section of the proposal.

Proposal Content	Page Guideline	Section and Appendix References
<p>1. Proposal Cover Page: The proposal cover sheet shall be signed by an institutional official who is authorized to certify institutional support and sponsorship of the investigation and of the management of the proposal. (The electronic proposal submission process located at http://proposals.hq.nasa.gov/proposal.cfm/ generates this form).</p> <ul style="list-style-type: none"> Indicate on the SYS-EYFUS cover page which of the Pillars the proposal will address. Selection of multiple Pillars is allowed. <p>Pillar One: Interactive Environments. Integration of NASA science, engineering, and technology into a high-resolution <i>interactive</i> experience, using (only as appropriate or capable) 3D video, spatial and stereo sound, haptic interfaces, olfactory emitters, or other forms of sensory transmission media.</p> <p>Pillar Two: Virtual Presence. High resolution, reality-based virtual worlds, using (only as appropriate or capable) 3D video, spatial and stereo sound, haptic interfaces, olfactory emitters, or other forms of sensory transmission media.</p> <p>Pillar Three: Immersive Technology Experience. Computer platforms, as stand-alone or linked to high-speed networks, that deliver an engaging, interactive educational experience using (only as appropriate or capable) 3D video, spatial and stereo sound, haptic interfaces, olfactory emitters, or other forms of sensory transmission media.</p> <ul style="list-style-type: none"> Enterprise Involvement: Indicate which Enterprise or Enterprises will be involved in the coordination of teacher training through the Enterprise Education Office. Enter it as a theme in SYS-EYFUS <ul style="list-style-type: none"> Aerospace Technology Biological and Physical Research Earth Science Space Flight, Human Exploration and Development of Space Space Science and Astrobiology 	1	<p>Appendix A</p> <p>Use the SYS-EYFUS Cover Page</p>

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Proposal Content	Page Guideline	Section and Appendix References
<ul style="list-style-type: none"> ▪ Proposal Abstract (200-300 words). Include a description of the project's objectives, number of participants in the project, method of approach, and the measurable outcomes. A sample electronic Proposal Abstract page is included in Appendix B. ▪ Proposed Cost: The budget section of the electronic proposal cover page should include a budget breakdown for each year of the proposed work (2years). The electronic form will provide a total summary for the entire period of the proposal. See Budget Guidelines in Appendix B. <p>The length of the electronic proposal cover page (as generated via SYS-EYFUS) may vary depending upon the length of the proposal abstract/summary. <u>However, the total cover-page packet, including the summary and budget figures, will count as only 1 page total.</u> A sample cover page packet is included in Appendix B.</p> <p>To print the Proposal Cover Page, select "View" and then use the "Print" Button on your Internet browser menu. Make sure your printed copy includes the Abstract and the breakdown of Budget Categories. Submit this Proposal Cover Page with your proposal hard copy.</p>		
2.Budget Narrative: Include explanatory notes for each line item in the budget.	6	(Appendix B)
3.Table of Contents	1	
4.Certification of Principal Investigator Eligibility Form	1	Appendix C
5.Certifications Regarding Lobbying, Debarment, Suspension and Other Responsibility Matters and Drug-Free Workplace Requirements Form. (This form <u>does not have to be submitted</u> with the proposal. The authorizing institutional signature on the Proposal Cover Page certifies that the proposing institution has read and is in compliance with these certifications)		Appendix D
6.Body of Proposal: Must contain the following areas: <ul style="list-style-type: none"> ▪ Project Purpose ▪ Innovation ▪ Diffusion Potential ▪ Project Feasibility ▪ Partnerships 	Up to total page allotment	(Sections 1.0-4.0)

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Proposal Content	Page Guideline	Section and Appendix References
7. Proposal equipment list	1	(Appendix B and Sections 1.0-4.0))

6.5 BACKGROUND INFORMATION

The following table is provided for NASA sources associated with the LTP and/or this CAN:

NASA Education Program	http://education.nasa.gov/
NASA Implementation Plan for Education 1998-2003 (as a reference baseline)	http://education.nasa.gov/implan/exec.html
NASA Technology Portal	http://nasatechnology.nasa.gov/index.cfm
NASA Classroom of the Future Home Page	http://www.cotf.edu
NASA Spacelink Home page	http://spacelink.nasa.gov
NASA Learning Technologies Project Revolutionary Concept Strategy Document (PowerPoint)	http://learn.arc.nasa.gov/ltp2003
NASA Commercial Technology	http://www.nctn.hq.nasa.gov
NASA Technology Readiness Levels documents	http://www.hq.nasa.gov/office/codeq/trl/
NASA Learning Technologies, NASA Classroom of the Future, and NASA SPACELINK benchmarking studies	http://learn.arc.nasa.gov/benchmark
User-Friendly Guide for Evaluation of NASA's Educational Programs Handbook	http://learners.gsfc.nasa.gov/Evaluation_Handbook.pdf
National Science Education Standards	http://stills.nap.edu/html/nses/
Presidential Landmark Education Reform Law	http://www.whitehouse.gov/infocus/education http://www.ed.gov/offices/OESE/esea/
U.S. Dept of Education E-Learning PDF	http://www.ed.gov/Technology/elearning/e-learning.pdf

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6.6 ACCESSIBILITY AND USABILITY GUIDELINES

NASA shall ensure that employees with disabilities have access to and use of information and data that is comparable to information and data available for other employees or members of public without disabilities. The proposal shall address how electronic and information technology accessibility will be met. For additional information regarding the Architectural and Transportation Barriers Compliance Board (Access Board) policies, the following resources are provided:

Accessibility Guidelines	<u>http://www.hq.nasa.gov/office/codea/codeao/section508/index.html</u>
Accessibility Guidelines	<u>http://section508.nasa.gov</u>
Usability Guidelines	<u>http://www.usability.gov</u>

6.7 SECURITY

Proposals shall not contain security-classified material.

7.0 Withdrawal

The offeror may withdraw proposal(s) at any time before award.

Further, it is recognized that offerors may be entertaining other options available. If such is the case and the offeror's proposal as submitted hereunder is accepted elsewhere, offerors are requested to notify NASA if the proposal is funded by another organization or of other changed circumstances which dictate termination of evaluation.

8.0 Selection for Award

When a proposal is not selected for award, the offeror will be notified. NASA will explain generally why the proposal was not selected.

When a proposal is selected for award, negotiation and award will be handled by the Earth Sciences Procurement Office, Code 210.5 at GSFC. The proposal is used as the basis for negotiation. The agreement officer may request certain business data and may forward an award instrument and other information pertinent to negotiation.

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9.0 Cancellation of CAN

NASA reserves the right to make no awards under this CAN and to cancel this CAN. NASA assumes no liability (including bid and proposal costs in case of cancellation) for canceling the CAN or for anyone's failure to receive actual notice of cancellation.

10.0 Proposal Selection Process

10.1 PRIMARY COMPONENTS

Proposal review will be based upon how successfully the product reflects NASA's vision, mission and priorities for education. The products proposed must clearly state the direct relationships to NASA's education priorities to provide educators with unique teaching tools and compelling teaching experiences and/or to engage minority or underrepresented students, educators and researchers in NASA's education program. The primary components of the solicitation proposal review process are as follows:

- a) A multi-member, cross-organizational panel will be appointed to review proposals and make recommendations through a merit process.
- b) Multiple expert evaluators will review proposals.
- c) Selected panelists will be those without a conflict of interest with proposals under review.
- d) The review panel will give merit grading to each reviewed proposal.
- e) Each proposal will receive a total score between 0 and 100 points.
- f) The LEARNERS Manager, through the agreement officer, may renegotiate proposal requirements and fiscal funding levels as necessary.
- g) Final Selection Official will be the GSFC LEARNERS Manager.

10.2 PROPOSAL RANKING

The highest-ranking proposals will be forwarded by the Review Panel for funding consideration to the LEARNERS Manager. Once the Review Board has made its recommendations, the Educational Technology Program Office and Learning Technologies Project management will announce a "short list." Offerors identified on the short list will be identified to demonstrate their prototypes to Educational Technology Program Office, Learning Technology Project management, and NASA Enterprise representatives in Washington, DC.

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The following selection factors will be taken into account. Please note that the position of a selection factor within this list does not indicate relative significance.

1. The evaluations of the Review Panel.
2. The recommendations of the LEARNERS Manager.
3. The degree to which the proposed projects meet the requirements of this cooperative agreement notice.
4. The variety of technologies and diversity of uses of the technologies employed.
5. Avoidance of redundancy and conflicts with the initiatives of other federal agencies.
6. The availability of funds.
7. Past performance findings.

10.3 CRITERIA FOR MERIT GRADING

The following sections represent the weighted categories for the solicitation of 100 points:

Project Purpose (20%)

Innovation (20%)

Diffusion Potential (20%)

Project Feasibility (15%)

Partnerships (15%)

Education Products (10%)

10.4 PROJECT PURPOSE

The Government will evaluate the Offeror's technical approach on its realism, effectiveness, and completeness in fulfilling the project purpose. Additionally, the Government will evaluate the product's ability to meet specific educational needs while targeting underserved communities/audiences.

10.5 INNOVATION

The Government will evaluate any new or innovative methods, techniques or technologies proposed, and how these may affect product delivery. The Government will also consider proposed effort in a national context by comparing and contrasting the project to other efforts or projects in the field.

10.6 DIFFUSION POTENTIAL

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The Government will evaluate the product's diffusion potential and the proposed approach to effectively reach the widest possible market, in the short term and the long term for award of a CAN. The proposed approach to address current educational problems or needs will be considered. The proposed cost-effectiveness and simplicity of the approach versus other alternatives will also be considered. The feasibility of the offeror's plan for disseminating the product will be evaluated.

10.7 PROJECT FEASIBILITY

- a) The offerors ability to identify and discuss risk associated with the proposal will be evaluated for award of a CAN “The offeror’s ability to identify associated risk mitigation strategies will be evaluated for effectiveness.”

Accessibility and usability for learners with special needs and historically underserved communities will be evaluated for award of a CAN.

The offeror's proposed plan of product dissemination by partnership participants will be evaluated. Additionally, the alliance demonstrated with NASA enterprise-based programs will be considered for award of a CAN.

The offeror's methodology and procedures to accomplish the proposed particular technology will be evaluated for award of a CAN.

The Government will evaluate the work to be accomplished by the applicant team and the ability demonstrated to deal effectively with the technical complexity, educational pedagogy, and the organizational challenges associated with managing the project for award of a CAN.

The timeframes proposed for performance of the proposed project will be evaluated for award of a CAN.

10.8 PARTNERSHIPS

This evaluation for award of a CAN will include responsibilities of each partner, and the feasibility of the proposed contributions each partner will make to this project in the form of financial support, equipment, personnel, or other resources e.g., cost sharing. Also, the Government will evaluate the diversity of the partnership among the educational community, the education industry, academia, government, and commercial industry for award of a CAN. Past performance of each partner will also be considered.

10.9 EDUCATIONAL PRODUCTS

The Government will evaluate the proposer’s educational products that are poised for the widest possible market diffusion, that inspire and educate, that use

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innovative methods or emerging technologies, and that clearly address educational standards utilizing NASA data.

At the conclusion of the evaluation process, the totality of all evaluation findings will be presented to the Selecting Official who will make the final selection determinations. A critical consideration in the selection of proposals for funding will be to maximize scientific return within the available budget. To achieve this objective, NASA will weigh the proposed costs of those proposals deemed meritorious against the available funding; final selection will reflect an appropriate balance.

11.0 List of Appendices

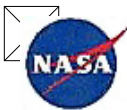
The following appendices are attached to this CAN:

Appendix A	Proposal Cover Page
Appendix B	Budget Narrative
Appendix C	Certification of Principal Investigator Eligibility
Appendix D	Certifications, Representations, and Other Offeror Statements
Appendix E	Model Cooperative Agreement for Education and Non-Profit Organizations Recipients
Appendix F	Model Cooperative Agreement for Commercial Firm Recipients
Appendix G	Instructions for Notice of Intent to Propose
Appendix H	Past Performance Questionnaire

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PROPOSAL COVER PAGE

(Date : mmm dd, yyyy)

XXX-XXXX-XXXX

Name of Submitting Institution:

Congressional District: N/A

Certification of Compliance with Applicable Executive Orders and U.S. Code

By submitting the proposal identified in this Cover Sheet/Proposal Summary in response to this Research Announcement, the Authorizing Official of the proposing institution (or the individual proposer if there is no proposing institution) as identified below:

- certifies that the statements made in this proposal are true and complete to the best of his/her knowledge;
- agrees to accept the obligations to comply with NASA award terms and conditions if an award is made as a result of this proposal; and
- confirms compliance with all provisions, rules, and stipulations set forth in the two Certifications contained in this NRA [namely, (i) Assurance of Compliance with the NASA Regulations Pursuant to Nondiscrimination in Federally Assisted Programs, and (ii) Certifications, Disclosures, And Assurances Regarding Lobbying and Debarment & Suspension]. Willful provision of false information in this proposal and/or its supporting documents, or in reports required under an ensuing award, is a criminal offense (U.S. Code, Title 18, Section 1001).

NASA PROCEDURE FOR HANDLING PROPOSALS

This proposal shall be used and disclosed for evaluation purposes only, and a copy of this Government notice shall be applied to any reproduction or abstract thereof. Any authorized restrictive notices that the submitter places on this proposal shall also be strictly complied with. Disclosure of this proposal for any reason outside the Government evaluation purposes shall be made only to the extent authorized by the Government.

[1] ... PI Information

Name:		Email:	
Organization:			
City, State, Zip:		Country:	

PI Signature and Date:

Authorizing Official:		Email:	
Title:		Phone:	
Institution:			
Address:			

AO Signature and Date:

[2] ... Co-Investigator

Name:		Email:	
Organization:			
City, State, Zip:		Country:	

[3] ... Proposal Title (Short and/or Full)

Short Title:	
Full Title:	

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[4] ... Science Areas (Can choose multiple science areas)

Pillar One: Interactive Environments Pillar Two: Virtual Presence Pillar Three: Immersive Technology Experience

[5] ... Theme (Choose the Enterprise(s) to be involved)

Aerospace Technology Biological and Physical Research Earth Science Space Flight, Human Exploration and Development of Space Space Science and Astrobiology

[6] ... Summary

200-300 word abstract

[6] ... Budget

Type	Year 1	Year 2	Year 3	Total
Direct Labor				
Other Direct Costs -				
Subcontracts				
- Consultants				
- Equipment				
- Supplies				
- Travel				
- Other				
Indirect Costs				
Other Applicable Costs				
Subtotal - Estimated				
Costs:				
Less: Proposed Cost				
Sharing - Cost Sharing:				
Budget Total				

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Appendix B – Budget Narrative

The following budget submission shall be provided with offers:

Type	Year 1	Year 2	Total
Direct Labor			
Other Direct Costs - Subcontracts			
- Consultants			
- Equipment			
- Supplies			
- Travel			
- Other			
Indirect Costs			
Other Applicable Costs			
Subtotal – Estimated Costs:			
Less: Proposed Cost Sharing – Cost Sharing:			
Budget Total			

1. Direct Labor (salaries, wages, and fringe benefits): Attachments should list number and titles of personnel, amount of time to be devoted to the project, and hourly salary rates.
2. Other Direct Costs:
 - (i) Subcontracts: Attachments should describe the work to be subcontracted, estimated amount, recipient (if known), and the reason for subcontracting. Additionally, describe the terms and conditions of the subcontract, how the price/cost was determined fair and reasonable, and details of competition resulting in the subcontract. Include copies of quotations and/or commercial price lists as applicable.
 - (ii) Consultants: Identify consultants to be used (name, address, phone), why they are necessary, the time they will spend on the project, and rates of pay. Describe the terms and conditions of the consultant relationship with the offeror, how the price/cost of consultant services was determined fair and reasonable, and any details of competition resulting in the consultant selection.
 - (iii) Equipment: Offerors attention is directed to 1260.27 and 1274.923 entitled, "Equipment and Other Property." Offerors shall list separately any item it intends to purchase under this cooperative agreement. Explain the need for items costing more than \$5,000. Describe basis for estimated cost. General-purpose equipment is not allowable as a direct cost unless specifically approved by the agreement officer. Any equipment purchase requested to be made as a direct charge under this cooperative agreement include the equipment description, how it will be used in the conduct of the effort proposed and why it cannot be purchased with indirect

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funds. Describe the terms and conditions of the purchase of equipment, how the price/cost was determined fair and reasonable, and details of competition resulting in the equipment purchase.

- (iv) Supplies: Provide general categories of needed supplies, the method of acquisition, estimated cost. Additionally, provide the details of the competition performed for the purchase of the needed supplies.
 - (v) Travel: Describe the purpose of the proposed travel in relation to the cooperative agreement and provide the basis of estimate, including information on destination, number of travelers (where known), per diem rate, and all other estimated costs associated with proposed travel.
 - (vi) Other: Enter the total of direct costs not covered by 2a through 2e. Attach an itemized list explaining the need for each item and the basis for the estimate. Enter the student stipends (number of students x amount of stipend for each).
3. Indirect Costs: Identify indirect cost rate(s) and base(s) as approved by the cognizant Federal agency, including the effective period of the rate. Provide the name, address, telephone number and email address, if known, of the Federal agency and official having cognizance. If unapproved rates are used, explain why, and include the computational basis for the indirect expense pool and corresponding allocation base for each rate. If rates are based upon a forward pricing rate agreement, provide a copy of the agreement with the budget proposal.
 4. Other Applicable Costs: Enter total of other applicable costs with an itemized list explaining the need for each item and basis for the estimate.
 5. Subtotal-Estimated Costs: Enter the sum of items 1 through 4.
 6. Less Proposed Cost Sharing (if any): Enter any amount proposed. If cost sharing is based on specific cost items, identify each item and amount in an attachment.
 7. Carryover Funds (if any): Enter the dollar amount of any funds that are expected to be available for carryover from the prior budget period. Identify how the funds will be used if they are not used to reduce the budget.
 8. Total Estimated Costs: Enter the total after subtracting items 6 and 7b from item 5.

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Appendix C – Principal Investigator Eligibility Certification

Completion of this form is required

1. Last Name First Name MI

2. Verification of Employment:

Employed by (institution):

School/Department (specify):

Check type of position

☐ Tenured ☐ Tenured-track ☐ Full Time Contractual

II. Previous NASA Funding

List all NASA awards, NASA contracts, NASA consulting from which the proposed PI received funding as PI during the past 5 years, including active awards.

Column A	Column B	Column C	Column D	Column E
Award	PI or CO-I	Title of Award	Period (from - to)	Amount
			/ / to / /	
			/ / to / /	
			/ / to / /	
			/ / to / /	
			/ / to / /	
			/ / to / /	
			/ / to / /	
			/ / to / /	
			/ / to / /	
			TOTAL FUNDING:	

Instructions:

Column A: Identify whether award was a research grant (R), education grant (E), contract (C), or consulting agreement (A).

Column B: For each award indicate whether applicant was a PI or CO-I.

Column C: List title of award.

Column D: List the period of performance.

Column E: List amount of award. For awards on which the proposed PI was a CO-I, show only that portion of the award, which supported the proposed PI's personal research, and attach an explanation of how this was determined. For awards on which the proposed PI was the PI, show the total award amount.

Certification Authority

The person authorized to sign below certifies that the information provided is accurate.

Authorized Institutional Official (typed):

Title:

Signature:

APPENDIX D – REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF OFFERORS

1. Assurance of Compliance with the NASA Regulations Pursuant to Nondiscrimination in Federally Assisted Programs

The (*Institution, corporation, firm, or other organization on whose behalf this assurance is signed, hereinafter called "Applicant "*) hereby agrees that it will comply with Title VI of the Civil Rights Act of 1964 (P.L. 88-352), Title IX of the Education Amendments of 1972 (20 U.S.C. 1680 et seq.), Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and the Age Discrimination Act of 1975 (42 U.S.C. 16101 et seq.), and all requirements imposed by or pursuant to the Regulation of the National Aeronautics and Space Administration (14 CFR Part 1250) (hereinafter called "NASA") issued pursuant to these laws, to the end that in accordance with these laws and regulations, no person in the United States shall, on the basis of race, color, national origin, sex, handicapped condition, or age be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which the Applicant receives federal financial assistance from NASA; and hereby give assurance that it will immediately take any measure necessary to effectuate this agreement.

If any real property or structure thereon is provided or improved with the aid of federal financial assistance extended to the Applicant by NASA, this assurance shall obligate the Applicant, or in the case of any transfer of such property, any transferee, for the period during which the real property or structure is used for a purpose for which the federal financial assistance is extended or for another purpose involving the provision of similar services or benefits. If any personal property is so provided, this assurance shall obligate the Applicant for the period during which it retains ownership or possession of the property. In all other cases, this assurance shall obligate the Applicant for the period during which the federal financial assistance is extended to it by NASA.

This assurance is given in consideration of and for the purpose of obtaining any and all federal grants, loans, contracts, property, discounts, or other federal financial assistance extended after the date hereof to the Applicant by NASA, including installment payments after such date on account of applications for federal financial assistance which were approved before such date. The Applicant recognizes and agrees that such federal financial assistance will be extended in reliance on the representations and agreements

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made in this assurance, and that the United States shall have the right to seek judicial enforcement of this assurance. This assurance is binding on the Applicant, its successors, transferees, and assignees, and the person or persons whose signatures appear on the Proposal Cover Sheet above are authorized to sign on behalf of the Applicant.

**2. CERTIFICATIONS, DISCLOSURES, AND ASSURANCES REGARDING LOBBYING
AND DEBARMENT & SUSPENSION**

1. LOBBYING

As required by Section 1352, Title 31 of the U.S. Code, and implemented at 14 CFR Part 1271, as defined at 14 CFR Subparts 1271.110 and 1260.117, with each submission that initiates agency consideration of such applicant for award of a Federal contract, grant, or cooperative agreement exceeding \$ 100,000, the applicant must **certify** that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit a Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

3. GOVERNMENTWIDE DEBARMENT AND SUSPENSION

As required by Executive Order 12549, and implemented at 14 CFR 1260.510, for prospective participants in primary covered transactions, as defined at 14 CFR Subparts 1265.510 and 1260.117—

(1) The prospective primary participant **certifies** to the best of its knowledge and belief, that it and its principals:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded by any Federal department or agency;

(b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and

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(d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

(2) Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

APPENDIX E

“MODEL” COOPERATIVE AGREEMENT FOR EDUCATIONAL AND NON-PROFIT ORGANIZATIONS

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This page is intentionally left blank. At time of award of the cooperative agreement(s), a NASA Form 1687 entitled, "Research Grant" will be incorporated into the final agreement.

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I. INTRODUCTION AND PURPOSE

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The purpose of this cooperative agreement is to incorporate current research on teaching and learning with technology to achieve meaningful utilization of innovative and immersive technology in the learning environment. This Investigation is expected to efficiently develop world-class educational products that are poised for the widest possible market diffusion, that inspire and educate, that use innovative methods or emerging technologies, and that clearly address educational standards utilizing NASA data.

Products leverage NASA-unique content of one or more of the five NASA Enterprises: Aerospace Technology, Earth Science, Human Space Flight, Biological and Physical Research, and Space Science and demonstrate relevance to one or more of three Learning Technology Project (LTP) Pillars:

Pillar One: Interactive Environments

Integration of NASA science, engineering, and technology into a high-resolution *interactive* experience, using (only as appropriate or capable) 3D video, spatial and stereo sound, haptic interfaces, olfactory emitters, or other forms of sensory transmission media.

Pillar Two: Virtual Presence

High resolution, reality-based virtual worlds, using (only as appropriate or capable) 3D video, spatial and stereo sound, haptic interfaces, olfactory emitters, or other forms of sensory transmission media.

Pillar Three: Immersive Technology Experience

Computer platforms, as stand-alone *or* linked to *high-speed* networks, that deliver an engaging, interactive educational experience using (only as appropriate or capable) 3D video, spatial and stereo sound, haptic interfaces, olfactory emitters, or other forms of sensory transmission media.

This cooperative agreement resulted from Cooperative Agreement Notice (CAN) CAN-03-LTP-01, entitled “**LEARNERS (Leading Educators to Applications, Research, & NASA-related Educational Resources in Science)**” released by NASA’s Education Division, Educational Technology Program, Learning Technologies Project on * . This CAN resulted in the selection of multiple recipients. The Goddard Space Flight Center’s LEARNERS Manager will coordinate the research activities arising from the CAN and resultant agreements.

***To be completed at release of CAN**

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II. PROVISIONS

The National Aeronautics and Space Administration (NASA) cooperative agreements are negotiated under the authority of 42 U.S.C. 2473(c)(5), the National Aeronautics and Space Act. Subpart A of the NASA Grant and Cooperative Agreement Handbook (also subpart A of 14 CFR Part 1260 issued under the authority of 42 U.S.C. 2473(c)(1), Pub. L. 97-258, 96 Stat. 1003 (31 U.S.C. 6301 et seq.), and OMB Circular A-110), provides supplemental NASA policies that clarify and amplify government-wide regulations for awarding and administering grants and cooperative agreements with **educational and non-profit organizations**.

It is NASA policy that, in general, research with foreign organizations will not be conducted through cooperative agreements, but instead will be accomplished on a no-exchange-of-funds basis. In these cases, NASA enters into agreements undertaking projects of international scientific collaboration. NASA policy on performing research with foreign organizations on a no-exchange-of-funds basis is set forth at NASA Federal Acquisition Regulation Supplement 1835.016-70. In rare instances, NASA may enter into an international agreement under which funds will be transferred to a foreign recipient. Cooperative agreements to foreign organizations are made on an exceptional basis only.

Throughout this Appendix, the term “grant” includes “cooperative agreement” unless otherwise indicated.

The following provisions required by 14 CFR 1260.20 are incorporated by reference:

FULL TEXT REFERENCE	TITLE	DATE
§1260.21	Compliance with OMB Circular A-110	Oct 2000
§1260.22	Technical Publications and Reports	Oct 2000
§1260.23	Extensions	Oct 2000
§1260.24	Termination and Enforcement	Oct 2000
§1260.25	Change in Principal Investigator or Scope	Oct 2000
§1260.26	Financial Management	Aug 2003
§1260.27	Equipment and Other Property (Deviation)	Oct 2000
§1260.28	Patent Rights	Oct 2000
§1260.30	Rights in Data	Oct 2000
§1260.31	National Security	Oct 2000
§1260.32	Nondiscrimination	Oct 2000

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§1260.33	Subcontracts	Oct 2000
§1260.34	Clean Air-Water	Oct 2000
§1260.35	Investigative Requirements	Oct 2000
§1260.36	Travel and Transportation	Oct 2000
§1260.37	Safety	Oct 2000
§1260.38	Drug-Free Workplace	Oct 2000
§1260.39	Buy American Encouragement	May 2003

Source: 14 CFR 1260. Provisions incorporated by reference have the same force and effect as if they were given in full text. Copies of Code of Federal Regulation volumes are available in many libraries and for purchase from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. Copies of OMB circulars referenced in the provisions may be obtained from the Office of Administration, Publications Unit, Room G-236, New Executive Office Building, Washington, D.C. 20503. An index of existing Circulars is contained in 5 CFR 1310.

Deleted: ¶

III. SPECIAL CONDITIONS

§1260.51 COOPERATIVE AGREEMENT SPECIAL CONDITION (OCTOBER 2000)

(a) This award is a cooperative agreement as it is anticipated there will be substantial NASA involvement during performance of the effort. NASA and the Recipient mutually agree to the following statement of anticipated cooperative interactions which may occur during the performance of this effort as expressed by * final negotiated Investigator Proposal dated *, incorporated into this Agreement as Attachment 1.

(b) The terms "grant" and "Recipient" mean "cooperative agreement" and "Recipient of cooperative agreement," respectively, wherever the terms appear in provisions and special conditions included in this agreement.

(c) NASA's ability to participate and perform its collaborative effort under this cooperative agreement is subject to the availability of appropriated funds and nothing in this cooperative agreement commits the United States Congress to appropriate funds therefore.

*to be completed at award

§ 1260.52 MULTIPLE YEAR GRANT OR COOPERATIVE AGREEMENT (OCTOBER 2000)

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This is a multiple year grant or cooperative agreement. Contingent on the availability of funds, scientific progress of the project, and continued relevance to NASA programs, NASA anticipates continuing support at approximately the following levels:

Second year \$ * , Anticipated funding date * .

***To be completed at award**

§ 1260.53 INCREMENTAL FUNDING (OCTOBER 2000)

(a) Only \$ * of the amount indicated on the face of this award is available for payment and allotted to this award. NASA contemplates making additional allotments of funds during performance of this effort. It is anticipated that these funds will be obligated as appropriated funds become available without any action required by the Recipient. The Recipient will be given written notification by the NASA Grant Officer.

(b) The recipient agrees to perform work up to the point at which the total amount paid or payable by the Government approximates but does not exceed the total amount actually allotted to this grant or cooperative agreement. NASA is not obligated to reimburse the Recipient for the expenditure of amounts in excess of the total funds allotted by NASA to this grant or cooperative agreement. The Recipient is not authorized to continue performance beyond the amount allotted to this award.

***To be completed at award**

§ 1260.54 COST SHARING (OCTOBER 2000)

(a) NASA and the Recipient will share in providing the resources necessary to perform the agreement. NASA funding and non-cash contributions (personnel, equipment, facilities, etc.) and the dollar value of the Recipient's cash and/or non-cash contribution will be on a * percent NASA; * percent Recipient basis.

(b) The funding and non-cash contributions by both parties is represented by the following dollar amounts:

Government Share	<u> * </u>
Recipient Share	<u> * </u>
Total Amount	<u> * </u>

(c) Criteria and procedures for the allowability and allocability of cash and non-cash contributions shall be governed by § 1260.123, Cost Sharing or Matching. The applicable Federal cost principles are cited in § 1260.127.

(d) The Recipient's share shall not be charged to the Government under this agreement or under any other contract, grant, or cooperative agreement.

***To be completed at award**

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§ 1260.56 WITHHOLDING (August 2003)

If a Recipient fails to comply with the project objectives, the terms and conditions of this award, or reporting requirements under this or previous NASA awards, NASA may withhold advance payments under this award including its augmentations, and may also withhold advance payments under future awards to the Recipient, pending correction of the deficiency by the Recipient. Upon determination that the deficiency has been corrected, the cognizant NASA Financial Management Office shall resume advance payments and release of previously withheld amounts after coordination with the Grant Officer.

§ 1260.57 NEW TECHNOLOGY (OCTOBER 2000)

(a) Definitions.

Administrator, as used in this special condition, means the Administrator of the National Aeronautics and Space Administration (NASA) or duly authorized representative.

Grant, as used in this special condition, means any actual or proposed grant, cooperative agreement, understanding, or other arrangement, and includes any assignment, substitution of parties, or subcontract executed or entered into thereunder.

Made, as used in this special condition, means conception or first actual reduction to practice; provided, that in the case of a variety of plant, the date of determination (as defined in section 41(d) of the Plant Variety Protection Act, 7 U.S.C. 2401(d)) must also occur during the period of grant performance.

Nonprofit organization, as used in this special condition, means a domestic university or other institution of higher education or an organization of the type described in section 501(c)(3) of the Internal Revenue Code of 1954 (26 U.S.C. 501(c)) and exempt from taxation under section 501(a) of the Internal Revenue Code (26

U.S.C. 501(a)), or any domestic nonprofit scientific or educational organization qualified under a State nonprofit organization statute.

Practical application, as used in this special condition, means to manufacture, in the case of a composition or product; to practice, in the case of a process or method; or to operate, in case of a machine or system; and, in each case, under such conditions as to establish that the invention is being utilized and that its benefits are, to the extent permitted by law or Government regulations, available to the public on reasonable terms. Reportable item, as used in this special condition, means any invention, discovery, improvement, or innovation of the grantee, whether or not patentable or otherwise protectable under Title 35 of the United States Code, made in the performance of any work under any NASA grant or in the performance of any work that is reimbursable under any provision in any NASA grant providing for reimbursement of costs incurred before the effective date of the grant. Reportable items include, but are not limited to, new processes, machines, manufactures, and compositions of matter, and improvements to, or new applications of, existing processes, machines, manufactures, and compositions of matter. Reportable items also include new computer programs, and improvements to,

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or new applications of, existing computer programs, whether or not copyrightable or otherwise protectable under Title 17 of the United States Code.

Small business firm, as used in this special condition, means a domestic small business concern as defined at 15 U.S.C. 632 and implementing regulations (see 13 CFR section 121.401 et seq.) of the Administrator of the Small Business Administration.

Subject invention, as used in this special condition, means any reportable item which is or may be patentable or otherwise protectable under Title 35 of the United States Code, or any novel variety of plant that is or may be protectable under the Plant

Variety Protection Act (7 U.S.C. 2321 et seq.).

(b) Allocation of principal rights.

(1) Presumption of title.

(i) Any reportable item that the Administrator considers to be a subject invention shall be presumed to have been made in the manner specified in paragraph (1) or (2) of section 305(a) of the National Aeronautics and Space Act of 1958 (42 U.S.C. 2457(a)) (hereinafter called "the Act"), and that presumption shall be conclusive unless at the time of reporting the reportable item the Recipient submits to the Grant Officer a written statement, containing supporting details, demonstrating that the reportable item was not made in the manner specified in paragraph (1) or (2) of section 305(a) of the Act.

(ii) Regardless of whether title to a given subject invention would otherwise be subject to an advance waiver or is the subject of a petition for waiver, the Recipient may nevertheless file the statement described in paragraph (b)(1)(i) of this special condition. The Administrator will review the information furnished by the Recipient in any such statement and any other available information relating to the circumstances surrounding the making of the subject invention and will notify the Recipient whether the Administrator has determined that the subject invention was made in the manner specified in paragraph (1) or (2) of section 305(a) of the Act.

(2) Property rights in subject inventions. Each subject invention for which the presumption of paragraph (b)(1)(i) of this special condition is conclusive or for which there has been a determination that it was made in the manner specified in paragraph (1) or (2) of section 305(a) of the Act shall be the exclusive property of the United States as represented by NASA unless the Administrator waives all or any part of the rights of the United States, as provided in paragraph (b)(3) of this special condition.

(3) Waiver of rights.

(i) Section 305(f) of the Act provides for the promulgation of regulations by which the Administrator may waive the rights of the United States with respect to any invention or class of inventions made or that may be made under conditions specified in paragraph (1) or (2) of section 305(a) of the Act. The promulgated NASA Patent Waiver Regulations, 14 CFR part 1245, subpart 1, have adopted the Presidential Memorandum on Government Patent Policy of February 18, 1983, as a guide in acting on petitions (requests) for such waiver of rights.

(ii) As provided in 14 CFR Part 1245, subpart 1, Recipients may petition, either prior to execution of the grant or within 30 days after execution of the grant, for advance waiver of rights to any or all of the inventions that may be made under a grant. If such a petition is not submitted, or if after submission it is denied, the Recipient (or an employee

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inventor of the Recipient) may petition for waiver of rights to an identified subject invention within eight months of first disclosure of the invention in accordance with paragraph (e)(2) of this special condition, or within such longer period as may be authorized in accordance with 14 CFR 1245.105.

(c) Minimum rights reserved by the Government.

(1) With respect to each subject invention for which a waiver of rights is applicable in accordance with 14 CFR part 1245, subpart 1, the Government reserves--

(i) An irrevocable, nonexclusive, nontransferable, royalty-free license for the practice of such invention throughout the world by or on behalf of the United States or any foreign government in accordance with any treaty or agreement with the United States; and

(ii) Such other rights as stated in 14 CFR 1245.107.

(2) Nothing contained in this paragraph (c) shall be considered to grant to the Government any rights with respect to any invention other than a subject invention.

(d) Minimum rights to the Recipient.

(1) The Recipient is hereby granted a revocable, nonexclusive, royalty-free license in each patent application filed in any country on a subject invention and any resulting patent in which the Government acquires title, unless the Recipient fails to disclose the subject invention within the times specified in paragraph (e)(2) of this special condition. The Recipient's license extends to its domestic subsidiaries and affiliates, if any, within the corporate structure of which the Recipient is a party and includes the right to grant sublicenses of the same scope to the extent the Recipient was legally obligated to do so at the time the grant was awarded. The license is transferable only with the approval of the Administrator except when transferred to the successor of that part of the Recipient's business to which the invention pertains.

(2) The Recipient's domestic license may be revoked or modified by the Administrator to the extent necessary to achieve expeditious practical application of the subject invention pursuant to an application for an exclusive license submitted in accordance with 37 CFR part 404, Licensing of Government Owned Inventions. This license will not be revoked in that field of use or the geographical areas in which the Recipient has achieved practical application and continues to make the benefits of the invention reasonably accessible to the public. The license in any foreign country may be revoked or modified at the discretion of the Administrator to the extent the Recipient, its licensees, or its domestic subsidiaries or affiliates have failed to achieve practical application in that foreign country.

(3) Before revocation or modification of the license, the Recipient will be provided a written notice of the Administrator's intention to revoke or modify the license, and the Recipient will be allowed 30 days (or such other time as may be authorized by the Administrator for good cause shown by the Recipient) after the notice to show cause why the license should not be revoked or modified. The Recipient has the right to appeal to the Administrator any decision concerning the revocation or modification of its license.

(e) Invention identification, disclosures, and reports.

(1) The Recipient shall establish and maintain active and effective procedures to assure that reportable items are promptly identified and disclosed to Recipient personnel

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responsible for the administration of this New Technology special condition within six months of conception and/or first actual reduction to practice, whichever occurs first in the performance of work under this grant. These procedures shall include the maintenance of laboratory notebooks or equivalent records and other records as are reasonably necessary to document the conception and/or the first actual reduction to practice of the reportable items, and records that show that the procedures for identifying and disclosing reportable items are followed. Upon request, the Recipient shall furnish the Grant Officer a description of such procedures for evaluation and for determination as to their effectiveness.

(2) The Recipient will disclose each reportable item to the Grant Officer within two months after the inventor discloses it in writing to Recipient personnel responsible for the administration of this New Technology special condition or, if earlier, within six months after the Recipient becomes aware that a reportable item has been made, but in any event for subject inventions before any on sale, public use, or publication of such invention known to the Recipient. The disclosure to the agency shall be in the form of a written report and shall identify the grant under which the reportable item was made and the inventor(s) or innovator(s). It shall be sufficiently complete in technical detail to convey a clear understanding, to the extent known at the time of the disclosure, of the nature, purpose, operation, and physical, chemical, biological, or electrical characteristics of the reportable item. The disclosure shall also identify any publication, on sale, or public use of any subject invention and whether a manuscript describing such invention has been submitted for publication and, if so, whether it has been accepted for publication at the time of disclosure. In addition, after disclosure to the agency, the Recipient will promptly notify the agency of the acceptance of any manuscript describing a subject invention for publication or of any on sale or public use planned by the Recipient for such invention.

(3) The Recipient shall furnish the Grant Officer the following:

(i) Interim reports every 12 months (or such longer period as may be specified by the Grant Officer) from the date of the grant, listing reportable items during that period, and certifying that all reportable items have been disclosed (or that there are no such inventions) and that the procedures required by paragraph (e)(1) of this special condition have been followed.

(ii) A final report, within 3 months after completion of the grant work, listing all reportable items or certifying that there were no such reportable items, and listing all subcontracts at any tier containing a patent rights clause or certifying that there were no such subcontracts.

(4) The Recipient agrees, upon written request of the Grant Officer, to furnish additional technical and other information available to the Recipient as is necessary for the preparation of a patent application on a subject invention and for the prosecution of the patent application, and to execute all papers necessary to file patent applications on subject inventions and to establish the Government's rights in the subject inventions.

(5) The Recipient agrees, subject to FAR 27.302(j), that the Government may duplicate and disclose subject invention disclosures and all other reports and papers furnished or required to be furnished pursuant to this special condition. (f) Examination of records relating to inventions.

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(1) The Grant Officer or any authorized representative shall, until 3 years after final payment under this grant, have the right to examine any books (including laboratory notebooks), records, and documents of the Recipient relating to the conception or first actual reduction to practice of inventions in the same field of technology as the work under this grant to determine whether--

- (i) Any such inventions are subject inventions;
- (ii) The Recipient has established and maintained the procedures required by paragraph (e)(1) of this special condition; and
- (iii) The Recipient and its inventors have complied with the procedures.

(2) If the Grant Officer learns of an unreported Recipient grantee invention that the Grant Officer believes may be a subject invention, the Recipient may be required to disclose the invention to the agency for a determination of ownership rights.

(3) Any examination of records under this paragraph will be subject to appropriate conditions to protect the confidentiality of the information involved.

- (g) Withholding of payment (this paragraph does not apply to subcontracts).

(1) Any time before final payment under this grant, the Grant Officer may, in the Government's interest, withhold payment until a reserve not exceeding \$50,000 or 5 percent of the amount of this grant, whichever is less, shall have been set aside if, in the Grant Officer's opinion, the Recipient fails to--

- (i) Establish, maintain, and follow effective procedures for identifying and disclosing reportable items pursuant to paragraph (e)(1) of this special condition;
- (ii) Disclose any reportable items pursuant to paragraph (e)(2) of this special condition;
- (iii) Deliver acceptable interim reports pursuant to paragraph (e)(3)(i) of this special condition; or
- (iv) Provide the information regarding subcontracts pursuant to paragraph (h)(4) of this special condition.

(2) Such reserve or balance shall be withheld until the Grant Officer has determined that the Recipient has rectified whatever deficiencies exist and has delivered all reports, disclosures, and other information required by the grant.

(3) Final payment under the grant shall not be made before the Recipient delivers to the Grant Officer all disclosures of reportable items required by paragraph (e)(2) of this special condition, and an acceptable final report pursuant to paragraph (e)(3)(ii) of this special condition.

(4) The Grant Officer may decrease or increase the sums withheld up to the maximum authorized in paragraph (g)(1) of this special condition. No amount shall be withheld under this paragraph while the amount specified by this paragraph is being withheld under other provisions of the grant. The withholding of any amount or the subsequent payment thereof shall not be construed as a waiver of any Government rights.

- (h) Subcontracts.

(1) Unless otherwise authorized or directed by the Grant Officer, the Recipient shall--

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(i) Include the clause at NASA FAR Supplement (NFS) 1852.227-70, New Technology, (suitably modified to identify the parties) in any subcontract hereunder (regardless of tier) with other than a small business firm or nonprofit organization for the performance of experimental, developmental, or research work; and

(ii) Include the clause at FAR 52.227-11 (suitably modified to identify the parties) in any subcontract hereunder (regardless of tier) with a small business firm or nonprofit organization for the performance of experimental, developmental, or research work.

(2) In the event of a refusal by a prospective subcontractor to accept such a clause the Recipient--

(i) Shall promptly submit a written notice to the Grant Officer setting forth the subcontractor's reasons for such refusal and other pertinent information that may expedite disposition of the matter; and

(ii) Shall not proceed with such subcontract without the written authorization of the Grant Officer.

(3) In the case of subcontracts at any tier, the agency, subcontractor, and Recipient agree that the mutual obligations of the parties created by this special condition constitute a contract between the subcontractor and NASA with respect to those matters covered by this grant.

(4) The Recipient shall promptly notify the Grant Officer in writing upon the award of any subcontract at any tier containing a patent rights clause by identifying the subcontractor, the applicable patent rights clause, the work to be performed under the subcontract, and the dates of award and estimated completion. Upon request of the Grant Officer, the Recipient shall furnish a copy of such subcontract, and, no more frequently than annually, a listing of the subcontracts that have been awarded.

(5) The subcontractor will retain all rights provided for the Recipient in paragraph (h)(1)(i) or (ii) of this special condition, whichever is included in the subcontract, and the Recipient will not, as part of the consideration for awarding the subcontract, obtain rights in the subcontractor's subject inventions.

(i) Preference for United States industry. Unless provided otherwise, no Recipient that receives title to any subject invention and no assignee of any such Recipient shall grant to any person the exclusive right to use or sell any subject invention in the United States unless such person agrees that any products embodying the subject invention will be manufactured substantially in the United States. However, in individual cases, the requirement may be waived by the Administrator upon a showing by the Recipient or assignee that reasonable but unsuccessful efforts have been made to grant licenses on similar terms to potential licensees that would be likely to manufacture substantially in the United States or that under the circumstances domestic manufacture is not commercially feasible.

**§1260.58 DESIGNATION OF NEW TECHNOLOGY
REPRESENTATIVE AND PATENT REPRESENTATIVE
(OCTOBER 2000)**

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(a) For purposes of administration of the special condition of this grant entitled "New Technology," the following named representatives are hereby designated by the Grant Officer to administer such special condition:

<u>Title</u>	<u>Office Code</u>	<u>Address (including zip code)</u>
New Technology Representative	504	Goddard Space Flight Center Representative Greenbelt, MD 20771
Patent Representative	503	Goddard Space Flight Center Representative Greenbelt, MD 20771

(b) Reports of reportable items, and disclosure of subject inventions, interim reports, final reports, utilization reports, and other reports required by the special condition, as well as any correspondence with respect to such matters, should be directed to the New Technology Representative unless transmitted in response to correspondence or request from the Patent Representative. Inquires or requests regarding disposition of rights, election of rights, or related matters should be directed to the Patent Representative. This special condition shall be included in any subcontract hereunder requiring a "New Technology" provision or "Patent Rights--Retention by the Contractor (Short Form)" clause, unless otherwise authorized or directed by the Grant Officer. The respective responsibilities and authorities of the above-named representatives are set forth in 1827.305-370 of the NASA FAR Supplement.

**§ 1260.59A INVENTION REPORTING AND RIGHTS
(OCTOBER 2000)**

(a) As used in this provision:

(1) The term "invention" means any invention or discovery which is or may be patentable or otherwise protectable under Title 35 of the United States Code, or any novel variety of plant which is or may be protected under the Plant Variety Protection Act (7 U.S.C. 2321 et seq.).

(2) The term "made" when used in relation to any invention means the conception or first actual reduction to practice of such invention.

(b) The Recipient shall report promptly to the grant officer each invention made in the performance of work under this grant. The report of such invention shall –

(1) Identify the inventor(s) by full name; and

(2) Include such full and complete technical information concerning the invention as is necessary to enable an understanding of the nature and operation thereof.

(c) Reporting shall be made on NASA Form 1679 Disclosure of Invention and New Technology (Including Software).

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(d) The Recipient hereby grants to the Government of the United States of America, as represented by the Administrator of the National Aeronautics and Space Administration, the full rights, title, and interest in and to each such invention throughout the world.

§ 1260.60 PUBLIC INFORMATION (OCTOBER 2000)

Information regarding this grant (including a copy of this award document) may be released by the Recipient without restriction. However, technical information relating to work performed under this grant where there was a NASA contribution should be released by the Recipient only after consultation with the NASA Technical Officer.

§ 1260.61 ALLOCATION OF RISK/LIABILITY (OCTOBER 2000)

(a) With respect to activities undertaken under this agreement, the Recipient agrees not to make any claim against NASA or the U.S. Government with respect to the injury or death of its employees or its contractors and subcontractor employees, or to the loss of its property or that of its Contractors and subcontractors, whether such injury, death, damage or loss arises through negligence or otherwise, except in the case of willful misconduct.

(b) In addition, the Recipient agrees to indemnify and hold the U.S. Government and its Contractors and subcontractors harmless from any third party claim, judgment, or cost arising from the injury to or death of any person, or for damage to or loss of any property, arising as a result of its possession or use of any U.S. Government property.

**§1260.66 LISTING OF REPORTABLE EQUIPMENT AND OTHER
PROPERTY (OCTOBER 2000)**

(a) Title to federally-owned property provided to the Recipient remains vested in the Federal Government, and shall be managed in accordance with Sec. 1260.133. The following items of federally-owned property are being provided to the recipient for use in performance of the work under this grant or cooperative agreement:

NOT APPLICABLE

(b) The following specific items of equipment acquired by the Recipient have been identified by NASA for transfer of title to the Government when no longer required for performance under this grant or cooperative agreement. This equipment will be managed in accordance with 1260.134, and shall be transferred to NASA or NASA's designee in accordance with the procedures set forth at 1260.134(g):

TO BE DETERMINED AT AWARD

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**§ 1260.69 ELECTRONIC FUNDS TRANSFER PAYMENT
METHODS (OCTOBER 2000)**

(a) Payments under this cooperative agreement will be made by the Government either by check or electronic funds transfer (through the Treasury Fedline Payment System (FEDLINE) or the Automated Clearing House (ACH)), at the option of the Government. After award, but no later than 14 days before an invoice is submitted, the Recipient shall designate a financial institution for receipt of electronic funds transfer payments, and shall submit this designation to the Grant Officer or other Government official, as directed.

(b) For payment through FEDLINE, the Recipient shall provide the following information:

(1) Name, address, and telegraphic abbreviation of the financial institution receiving payment.

(2) The American Bankers Association 9-digit identifying number for wire transfers of the financing institution receiving payment if the institution has access to the Federal Reserve Communication System.

(3) Payee's account number at the financial institution where funds are to be transferred.

(4) If the financial institution does not have access to the Federal Reserve Communications System, name, address, and telegraphic abbreviation of the correspondent financial institution through which the financial institution receiving payment obtains wire transfer activity. Provide the telegraphic abbreviation and American Bankers Association identifying number for the correspondent institution.

(c) For payment through ACH, the Recipient shall provide the following information:

(1) Routing transit number of the financial institution receiving payment (same as American Bankers Association identifying number used for FEDLINE).

(2) Number of account to which funds are to be deposited.

(3) Type of depositor account ("C" for checking, "S" for savings).

(4) If the Recipient is a new enrollee to the ACH system, a "Payment Information Form," SF 3881, must be completed before payment can be processed.

(d) In the event the Recipient, during the performance of this cooperative agreement, elects to designate a different financial institution for the receipt of any payment made using electronic funds transfer procedures, notification of such change and the required information specified above must be received by the appropriate Government official 30 days prior to the date such change is to become effective.

(e) The documents furnishing the information required in this clause must be dated and contain the signature, title, and telephone number of the Recipient official authorized to provide it, as well as the Recipient's name and contract number.

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(f) Failure to properly designate a financial institution or to provide appropriate payee bank account information may delay payments of amounts otherwise properly due.

(g) The requirements set forth in this special condition supercede grant provision 1260.26, Financial Management.

IV. ADDITIONAL TERMS

1. REPORT REQUIREMENTS

To ensure collection of systemic evaluation data on each project, basic reporting is required. These reporting requirements are in addition to the provisions at 1260.22. The milestones found in 1 above entitled "Milestone Requirements" are expected to measure progress toward one or more of the NASA Education Priorities. In addition, the following reports shall be delivered:

Each fiscal quarter, provide financial reports and updates on project activities.

A quarterly review of a project will be held via videoconferencing or teleconferencing, with the LEARNERS Manager, Learning Technologies Project Manager, the Educational Technology Program Officer, and other personnel, as invited by Educational Technology Program Management.

An annual summary report and demonstration of the product is required. All projects will be reviewed annually to determine their progress measured against their milestones.

These reports shall include at least one representative picture or illustration and provide descriptive text under the following topics:

- Title of the agreement and agreement number
- Period covered by the report
- Objective
- Approach
- Scientific Accomplishments
- Technology Accomplishments (including progress toward milestones)
- Status/Plans
- Point of contact (name, address, email)
- Caption for the graphic
- List (and abstracts) of all publications which cite work performed under this cooperative agreement, identifying which were refereed. If any publication

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is available on the Web, link from the publication reference to the publication site.

- List of conference presentations resulting from work performed under this cooperative agreement.
- Lists of all other media references in which the research was discussed.
- List of any patents filed or new technology reports resulting from work under this cooperative agreement.

2. MEETING PARTICIPATION REQUIREMENTS

To foster communication within the program, the following participation is required:

1. Learning Technologies Investigators kick-off meeting.
2. Annual NASA Education Technology Program conference held in Spring, generally between months of April – May.
3. Training workshops for NASA internal dissemination channels, including but not limited to the Education Resource Center Network and the Aerospace Education Specialists Program.

3. SOFTWARE SUBMISSION CRITERIA

Recipients may release their software by posting that software to their own world-wide-web addresses. There is no requirement that NASA provide approval of this recipient release prior to its being posted. However, the recipients must make these releases in a manner consistent with this agreement. Specifically, any assertion of data rights or patent rights by the recipients must be in accordance with clauses 1260.28 and 1260.30 of this agreement. In addition, the recipients are responsible for complying with all export control laws.

Recipients are required to assist NASA in obtaining approval for posting software to a NASA web site.

The recipient shall include a completed NASA Form 1679 (“Disclosure of Invention and New Technology (Including Software)”) with each software submission. All submissions of software under this cooperative agreement shall contain the following legend:

“This software is designated for public release under NASA Cooperative Agreement Number NCC_____ and may be publicly released after approval for release has been granted by GSFC Software Release Official.”

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All software submissions shall be made to the National HPCC Software Exchange (NHSE). All submissions shall, at a minimum, meet the "checked" category criteria, as described at the NHSE URL (<http://www.nhse.org>; "HPCC Software and Enabling Technology; NHSE Software Catalog; Explanation of review procedures; Scope, completeness, and documentation guidelines").

4. PROCEDURES FOR INVOICING FOR ADVANCE PAYMENTS

Each payment under this Agreement will be made on an advance basis in accordance with the Schedule provided in Table 1 of Additional Term 8. below. Advance payment for a particular milestone will only be made after all previous applicable milestones have been successfully completed. If the Recipient is late in completing any performance milestones, advance payment for the next milestone will be made as soon as the milestone is met, subject to availability of funds. Additionally, recipients are to be paid in advance, provided they maintain or demonstrate the willingness to maintain:

- (i) Written procedures that minimize the time elapsing between the transfer of funds and disbursement by the recipient; and
- (ii) Financial management systems that meet the standards for fund control and accountability as established in § 1260.121.

(a) The following procedures will be used to make advance payments under this agreement:

1) Recipient may invoice for the first milestone upon award of the Cooperative Agreement, signed by the NASA Agreements Officer. By submission of its first invoice, the recipient certifies that it has an established accounting system which complies with generally accepted accounting principles and with the requirements of this agreement, and that appropriate arrangements have been made for receiving, distributing, and accounting for Federal funds received under this agreement.

2) Upon completion of this and each subsequent milestone, the Recipient shall submit the appropriate documentation for that milestone to GSFC's LEARNERS Manager. The GSFC LEARNERS Manager will perform a technical assessment of this documentation and determine whether to accept or reject it. Should a submission be determined to be unacceptable to the GSFC LEARNERS Manager, discussions may be held between NASA and the Recipient in order to clarify or improve documentation to render it acceptable.

3) Upon final acceptance of each milestone, the GSFC LEARNERS Manager will notify the Recipient's Principal Investigator and the Agreement Officer that this

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milestone is complete, and that the Recipient may submit an invoice for the next milestone.

4) The contractor shall submit invoices as follows: (1) The original and two (2) copies of all invoices shall be sent directly to the Agreement Officer, Code: 210.5, addressed to the payment office designated on the cover page of this agreement. In addition, one copy shall be sent to the GSFC LEARNERS Manager. Each invoice shall clearly reference the milestone description on the face of the document. The Recipient shall mark the face page of invoice copies 1 and 2 with the name and address of the following parties to facilitate distribution of paid copies of invoices by the payment office:

Copy 1: NASA Agreement Officer

Copy 2: Recipient

All invoices shall reference the Agreement number as shown on the cover page of this Agreement.

5) After certification by the Agreement Officer, invoices shall be forwarded by the Agreements Officer to the Cost and Commercial Accounts Department, Code 155 NASA/Goddard Space Flight Center, Greenbelt, MD 20771. The above office is considered to be the "Designated Billing Office" and the "Designated Payment Office."

(b) A milestone may be successfully completed in advance of the date appearing in paragraph (b) of this clause. However, advance payment shall not be made for the next milestone prior to that date without the written consent of the Agreements Officer.

(c) ADVANCE PAYMENT FOR A MILESTONE WILL ONLY BE MADE UPON SUCCESSFUL COMPLETION OF THE PREVIOUS NEGOTIATED MILESTONES. NO ADVANCE PAYMENT WILL BE MADE FOLLOWING PARTIAL COMPLETION OF A PRIOR MILESTONE.

(e) The Government will not consider for payment invoices submitted after the expiration date of this agreement.

[End of Provision]

5. PERIOD OF PERFORMANCE

The Period of Performance of this agreement shall commence on the effective date indicated on the attached cover sheet and shall continue until the completion date indicated on the attached cover sheet.

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6. ADMINISTRATION AND AUDIT RESPONSIBILITY

Agreement Office: [NASA, Goddard Space Flight Center](#)
Earth Sciences Procurement Office
Attn: Lynne Hoppel/210.Y
Building 28, Room W115
Greenbelt Road
Greenbelt, MD 20711

Agreement Officer: Lynne C. Hoppel
(301) 286-3035
Lynne.C.Hoppel@nasa.gov

Recipient Address and Point of Contact: *

Government Audit Agency: *

The Payment Office: Cost and Commercial Accounts Department, Code 155
[Goddard Space Flight Center](#)
[Greenbelt, MD 20771](#)

*To be completed at award

**7. SCHEDULE OF MILESTONES, DUE DATES AND MILESTONE
PAYMENTS**

(A schedule substantially similar to the following shall be included in each final cooperative agreement with applicable information filled in. The order of the milestones will be negotiated prior to award of the cooperative agreement)

TABLE 1 – Chronological Schedule of Milestones, Due Dates and Milestone Payments

Mile- stone #	Mile- stone Label	Milestone Title <followed by statement of milestone>	Expected Completion Date	Milestone Payment Amount
<#>	<#>	<statement of milestone>	<date>	<\$>

Key:

<#>: Chronological sequence number. The order of these milestones is negotiable, prior to award.

<date>: Expected milestone completion date, to be proposed by offeror and negotiated.

<\$>: Cost to complete milestone, to be proposed by offeror and negotiated.

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**V. ATTACHMENTS TO THIS COOPERATIVE
AGREEMENT**

The following is a list of attachments made to this cooperative agreement:

Attachment No.	Attachment Title	Date of Attachment
1	*	*

*To be determined at award

APPENDIX F

“MODEL” COOPERATIVE AGREEMENT FOR COMMERCIAL FIRM RECIPIENTS

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This page is intentionally left blank. At time of award of the cooperative agreement(s), a NASA Form 1687 entitled, "Research Grant" will be incorporated into the final agreement.

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I. INTRODUCTION AND PURPOSE

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The purpose of this cooperative agreement is to incorporate current research on teaching and learning with technology to achieve meaningful utilization of innovative and immersive technology in the learning environment. This Investigation is expected to efficiently develop world-class educational products that are poised for the widest possible market diffusion, that inspire and educate, that use innovative methods or emerging technologies, and that clearly address educational standards utilizing NASA data.

Products leverage NASA-unique content of one or more of the five NASA Enterprises: Aerospace Technology, Earth Science, Human Space Flight, Biological and Physical Research, and Space Science and demonstrate relevance to one or more of three Learning Technology Project (LTP) Pillars:

Pillar One: Interactive Environments.

Integration of NASA science, engineering, and technology into a high-resolution *interactive* experience, using (only as appropriate or capable) 3D video, spatial and stereo sound, haptic interfaces, olfactory emitters, or other forms of sensory transmission media.

Pillar Two: Virtual Presence.

High resolution, reality-based virtual worlds, using (only as appropriate or capable) 3D video, spatial and stereo sound, haptic interfaces, olfactory emitters, or other forms of sensory transmission media.

Pillar Three: Immersive Technology Experience.

Computer platforms, as stand-alone *or* linked to *high-speed* networks, that deliver an engaging, interactive educational experience using (only as appropriate or capable) 3D video, spatial and stereo sound, haptic interfaces, olfactory emitters, or other forms of sensory transmission media.

This cooperative agreement resulted from Cooperative Agreement Notice (CAN) CAN-03-LTP-01, entitled “**LEARNERS (Leading Educators to Applications, Research, & NASA-related Educational Resources in Science)**” released by NASA’s Education Division, Educational Technology Program, Learning Technologies Project on * . This CAN resulted in the selection of multiple recipients. The Goddard Space Flight Center's LEARNERS Manager will coordinate the research activities arising from the CAN and resultant agreements.

***To be completed at release of CAN**

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II. PROVISIONS

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The National Aeronautics and Space Administration (NASA) cooperative agreements are negotiated under the authority of 42 U.S.C. 2473(c)(5), the National Aeronautics and Space Act. Subpart D of the NASA Grant and Cooperative Agreement Handbook (also subpart A of 14 CFR Part 1260 issued under the authority of 42 U.S.C. 2473(c)(1), Pub. L. 97-258, 96 Stat. 1003 (31 U.S.C. 6301 et seq.), and OMB Circular A-110), provides supplemental NASA policies that clarify and amplify government-wide regulations for awarding and administering grants and cooperative agreements with commercial firms. Part 1274 covers cooperative agreements with commercial firms where resource sharing is involved. The provisions at § 1274 provides supplemental NASA policies that clarify and amplify government-wide regulations for awarding and administering grants and cooperative agreements with **commercial firm recipients**.

An award may not be made to a foreign government. However, if selected as the best available source, an award may be made to a foreign firm. If a proposal is selected from a foreign firm sponsored by their respective government agency, or from entities considered quasi-governmental, special approvals must be obtained by NASA. It is NASA policy that, in general, research with foreign organizations will not be conducted through cooperative agreements, but instead will be accomplished on a no-exchange-of-funds basis. In these cases, NASA enters into agreements undertaking projects of international scientific collaboration. NASA policy on performing research with foreign organizations on a no-exchange-of-funds basis is set forth at NASA Federal Acquisition Regulation Supplement 1835.016-70. In rare instances, NASA may enter into an international agreement under which funds will be transferred to a foreign recipient. Cooperative agreements to foreign organizations are made on an exceptional basis only.

Throughout this Appendix, the term “grant” includes “cooperative agreement” unless otherwise indicated.

The following provisions required by 14 CFR 1274 are incorporated by reference:

FULL TEXT REFERENCE	TITLE	DATE
§1274.910	Authority	July 2002
§1274.911	Patent Rights	July 2002
§1274.912	Patent Rights - Retention by Recipient (Large Business)	July 2002
§1274.913	Patent Rights - Retention by the Recipient (Small Business)	July 2002
§1274.914	Requests for Waiver of Rights - Large Business	July 2002
§1274.915	Restrictions on Sale or Transfer of Technology to Foreign Firms or Institutions	July 2002
§1274.916	Liability of Risk of Loss	July 2002

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§ 1274.917	Additional Funds	July 2002
§ 1274.918	Incremental Funding	July 2002
§ 1274.919	Cost Principles and Accounting Standards	July 2002
§ 1274.920	Responsibilities of the NASA Technical Officer	July 2002
§ 1274.921	Publications and Reports: Non-proprietary Research Results	July 2002
§ 1274.922	Suspension or Termination	July 2002
§ 1274.923	Equipment and Other Property (Deviation)	July 2002
§ 1274.924	Civil Rights	July 2002
§ 1274.926	Clean Air-Water Pollution Control Acts	July 2002
§ 1274.927	Debarment and Suspension and Drug-Free Workplace	July 2002
§ 1274.928	Foreign National Employee Investigative Requirements	July 2002
§ 1274.929	Restrictions on Lobbying	July 2002
§ 1274.930	Travel and Transportation	July 2002
§ 1274.931	Electronic Funds Transfer Payment Methods	July 2002
§ 1274.932	Retention and Examination of Records	July 2002

Source: 14 CFR 1276. Provisions incorporated by reference have the same force and effect as if they were given in full text. Copies of Code of Federal Regulation volumes are available in many libraries and for purchase from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. Copies of OMB circulars referenced in the provisions may be obtained from the Office of Administration, Publications Unit, Room G-236, New Executive Office Building, Washington, D.C. 20503. An index of existing Circulars is contained in 5 CFR 1310.

Deleted: .¶

III. SPECIAL CONDITIONS

§ 1274.902 PURPOSE (JULY 2002)

The purpose of this cooperative agreement is to conduct a shared resource project that will lead to *. This cooperative agreement will advance the technology developments and research which have been performed on *. The specific objective is to *. This work will culminate in *.

*To be completed at award

[End of Provision]

§ 1274.903 RESPONSIBILITIES (JULY 2002)

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(A) THIS COOPERATIVE AGREEMENT WILL INCLUDE SUBSTANTIAL NASA PARTICIPATION DURING PERFORMANCE OF THE EFFORT. NASA AND THE RECIPIENT AGREE TO THE FOLLOWING RESPONSIBILITIES, A STATEMENT OF COOPERATIVE INTERACTIONS TO OCCUR DURING THE PERFORMANCE OF THIS EFFORT. NASA AND THE RECIPIENT SHALL EXERT ALL REASONABLE EFFORTS TO FULFILL THE RESPONSIBILITIES STATED BELOW.

- (b) NASA Responsibilities. The following NASA responsibilities are hereby set forth effective upon the start date, which unless stated otherwise, shall be the execution date of this bilateral Cooperative Agreement. The end date stated below may be changed by a written bilateral modification:

<u>Responsibilities</u>	<u>Start Date</u>	<u>End Date</u>
*	*	*

- (c) Recipient Responsibilities. The Recipient shall be responsible for particular aspects of project performance as set forth in the technical proposal dated * , attached hereto (or Statement of Work dated * , attached hereto). The following responsibilities are hereby set forth effective upon the start date, which unless stated otherwise, shall be the execution date of this bilateral Cooperative Agreement. The end date stated below may be changed by a written bilateral modification:

<u>Responsibilities</u>	<u>Start Date</u>	<u>End Date</u>
*	*	*

- (d) Since NASA contractors may obtain certain intellectual property rights arising from work for NASA in support of this agreement, NASA will inform Recipient whenever NASA intends to use NASA contractors to perform technical engineering services in support of this agreement.
- (e) Unless the Cooperative Agreement is terminated by the parties, end date can only be changed by execution of a bilateral modification.

***To be completed at award**

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[End of Provision]

§ 1276.904 RESOURCE SHARING REQUIREMENTS (JULY 2002)

Where NASA and other Government agencies are involved in the cooperative agreement, "NASA" shall also mean "Federal Government".

- (a) NASA and the Recipient will share in providing the resources necessary to perform the agreement. NASA funding and non-cash contributions (personnel, equipment, facilities, etc.) and the dollar value of the Recipient's cash and/or non-cash contribution will be on a * (NASA) - * (Recipient) basis. Criteria and procedures for the allowability and allocability of cash and non-cash contributions shall be governed by FAR Parts 30 and 31, and NFS Parts 1830 and 1831.
- (b) The Recipient's share shall not be charged to the Government under this Agreement or under any other contract, grant, or cooperative agreement, except to the extent that the Recipient's contribution may be allowable IR&D costs pursuant to FAR 31.205-18(e).

***To be completed at award**

[End of Provision]

§ 1274.905 RIGHTS IN DATA (JULY 2002)

- (a) Definitions.

"Data," means recorded information, regardless of form, the media on which it may be recorded, or the method of recording. The term includes, but is not limited to, data of a scientific or technical nature, computer software and documentation thereof, and data comprising commercial and financial information.

- (b) Data Categories.

(1) General: Data exchanged between NASA and Recipient under this cooperative agreement will be exchanged without restriction as to its disclosure, use or duplication except as otherwise provided below in this provision.

(2) Background Data: In the event it is necessary for Recipient to furnish NASA with Data which existed prior to, or produced outside of, this cooperative agreement, and such Data embodies trade secrets or comprises commercial or financial information which is privileged or confidential, and such Data is so identified with a suitable notice or legend, the Data will be maintained in confidence and disclosed and used by NASA and its contractors (under suitable protective conditions) only for the purpose of carrying out NASA's

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responsibilities under this cooperative agreement. Upon completion of activities under this agreement, such Data will be disposed of as requested by Recipient.

(3) Data first produced by Recipient: In the event Data first produced by Recipient in carrying out Recipient's responsibilities under this cooperative agreement is furnished to NASA, and Recipient considers such Data to embody trade secrets or to comprise commercial or financial information which is privileged or confidential, and such Data is so identified with a suitable notice or legend, the Data will be maintained in confidence for a period of [To Be Completed at Award (insert "two" to "five")] years after development of the data and be disclosed and used by NASA and its contractors (under suitable protective conditions) only for [To Be Completed at Award (insert appropriate purpose; for example: experimental; evaluation; research; development, etc.)] by or on behalf of NASA during that period. In order that NASA and its contractors may exercise the right to use such Data for the purposes designated above, NASA, upon request to the Recipient, shall have the right to review and request delivery of Data first produced by Recipient. Delivery shall be made within a time period specified by NASA.

(4) Data first produced by NASA: As to Data first produced by NASA in carrying out NASA's responsibilities under this cooperative agreement and which Data would embody trade secrets or would comprise commercial or financial information that is privileged or confidential if it had been obtained from the Recipient, will be marked with an appropriate legend and maintained in confidence for an agreed to period of up to (To Be Completed at Award – insert a period of up to 5 years) years after development of the information, with the express understanding that during the aforesaid period such Data may be disclosed and used (under suitable protective conditions) by or on behalf of the Government for Government purposes only, and thereafter for any purpose whatsoever without restriction on disclosure and use. Recipient agrees not to disclose such Data to any third party without NASA's written approval until the aforementioned restricted period expires. Use of this data under a separate cooperative agreement or contract issued to a party other than the Recipient for the purpose of continuing the project in the event this cooperative agreement is terminated by either party shall constitute a government purpose.

(5) Copyright.

(i) In the event Data is exchanged with a notice indicating the Data is protected under copyright as a published copyrighted work, or are deposited for registration as a published work in the U.S. Copyright Office, the following paid-up licenses shall apply:

(A) If it is indicated on the Data that the Data existed prior to, or was produced outside of, this agreement, the receiving party and others acting on its behalf, may reproduce, distribute, and prepare derivative works for

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the purpose of carrying out the receiving party's responsibilities under this cooperative agreement; and

(B) If the furnished Data does not contain the indication of paragraph (b)(5)(i)(A) of this section, it will be assumed that the Data was first produced under this agreement, and the receiving party and others acting on its behalf, shall be granted a paid up, nonexclusive, irrevocable, world-wide license for all such Data to reproduce, distribute copies to the public, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, by or on behalf of the receiving party. For Data that is computer software, the right to distribute shall be limited to potential users in the United States.

(ii) When claim is made to copyright, the Recipient shall affix the applicable copyright notice of 17 U.S.C. 401 or 402 and acknowledgment of Government sponsorship to the data when and if the data are delivered to the Government.

(6) Oral and visual information. If information which the Recipient considers to embody trade secrets or to comprise commercial or financial information which is privileged or confidential is disclosed orally or visually to NASA, such information must be reduced to tangible, recorded form (i.e., converted into Data as defined herein), identified and marked with a suitable notice or legend, and furnished to NASA within 10 days after such oral or visual disclosure, or NASA shall have no duty to limit or restrict, and shall not incur any liability for, any disclosure and use of such information.

(7) Disclaimer of Liability. Notwithstanding the above, NASA shall not be restricted in, nor incur any liability for, the disclosure and use of:

(i) Data not identified with a suitable notice or legend as set in paragraph (b)(2) of this section; nor

(ii) Information contained in any Data for which disclosure and use is restricted under paragraphs (b)(2) or (3) of this section, if such information is or becomes generally known without breach of the above, is known to or is generated by NASA independently of carrying out responsibilities under this agreement, is rightfully received from a third party without restriction, or is included in data which Participant has, or is required to furnish to the U.S. Government without restriction on disclosure and use.

(c) Marking of Data. Any Data delivered under this cooperative agreement, by NASA or the Recipient, shall be marked with a suitable notice or legend indicating the data was generated under this cooperative agreement.

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- (d) Lower Tier Agreements. The Recipient shall include this provision, suitably modified to identify the parties, in all subcontracts or lower tier agreements, regardless of tier, for experimental, developmental, or research work.

[End of Provision]

**§ 1274.906 DESIGNATION OF NEW TECHNOLOGY
REPRESENTATIVE AND PATENT REPRESENTATIVE (JULY
2002)**

- (a) For purposes of administration of the clause of this cooperative agreement entitled "PATENT RIGHTS - RETENTION BY THE CONTRACTOR (LARGE BUSINESS)" or "PATENT RIGHTS - RETENTION BY THE CONTRACTOR (SMALL BUSINESS)" the following named representatives are hereby designated by the Agreement Officer to administer such clause:

<u>Title</u>	<u>Office Code/Address</u>
New Technology Representative	504 Goddard Space Flight Center Greenbelt, MD 20771
Patent Representative	503 Goddard Space Flight Center Representative Greenbelt, MD 20771

- (b) Reports of reportable items, and disclosure of subject inventions, interim reports, final reports, utilization reports, and other reports required by the clause, as well as any correspondence with respect to such matters, should be directed to the New Technology Representative unless transmitted in response to correspondence or request from the Patent Representative. Inquiries or requests regarding disposition of rights, election of rights, or related matters should be directed to the Patent Representative. This clause shall be included in any subcontract hereunder requiring "PATENT RIGHTS - RETENTION BY THE CONTRACTOR (LARGE BUSINESS)" clause or "PATENT RIGHTS - RETENTION BY THE CONTRACTOR (SMALL BUSINESS)" clause, unless otherwise authorized or directed by the Agreement Officer. The respective responsibilities and authorities of the above-named representatives are set forth in NFS 1827.305-370.

[End of Provision]

§ 1274.907 DISPUTES (JULY 2002)

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- (a) In the event that a disagreement arises, representatives of the parties shall enter into discussions in good faith and in a timely and cooperative manner to seek resolution. If these discussions do not result in a satisfactory solution, the aggrieved party may seek a decision from the Dispute Resolution Official under paragraph (b) of this provision. This request must be presented no more than (3) three months after the events giving rise to the disagreement have occurred.
- (b) The aggrieved party may submit a written request for a decision to the Center Ombudsman, who is designated as the Dispute Resolution Official. The written request shall include a statement of the relevant facts, a discussion of the unresolved issues, and a specification of the clarification, relief, or remedy sought. A copy of this written request and all accompanying materials must be provided to the other party at the same time. The other party shall submit a written position on the matters in dispute within thirty (30) calendar days after receiving this notification that a decision has been requested. The Dispute Resolution Official shall conduct a review of the matters in dispute and render a decision in writing within thirty (30) calendar days of receipt of such written position.

[End of Provision]

§ 1274.908 MILESTONE PAYMENTS (JULY 2002)

- (a) By submission of the first invoice, the Recipient is certifying that it has an established accounting system which complies with generally accepted accounting principles, with the requirements of this agreement, and that appropriate arrangements have been made for receiving, distributing, and accounting for Federal funds received under this agreement.
- (b) Payments will be made upon the following milestones: [The schedule for payments may be based upon the Recipient's completion of specific tasks, submission of specified reports, or whatever is appropriate.]

<u>Date</u>	<u>Payment Milestone</u>	<u>Amount</u>
*	*	*

- (c) Upon submission by the recipient of invoices in accordance with the provisions of the agreement and upon certification by NASA of completion of the payable milestone, the Agreement Officer shall authorize payment. Payment shall be made within 30 calendar days after receipt of proper invoice. Payment shall be considered as being made on the date of electronic funds transfer. A proper invoice must include the following:

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- (i) Name and address of the Recipient.
 - (ii) Invoice date (The Recipient is encouraged to date invoices as close as possible to the date of the mailing or transmission).
 - (iii) Cooperative agreement number.
 - (iv) Description, milestone, and extended price of efforts/tasks performed.
 - (v) Payment terms.
 - (vi) Name and address of Recipient official to whom payment is to be sent. (Must be the same as that in the cooperative agreement or in a proper notice of assignment).
 - (vii) Name (where practicable), title, phone number, and mailing address of the person to be notified in the event of a defective invoice.
 - (viii) Any other information or documentation required by the cooperative agreement.
 - (ix) Taxpayer identification number (TIN).
 - (x) While not required, the recipient is strongly encouraged to assign an identification number to each invoice.
-
- (d) A payment milestone may be successfully completed in advance of the date appearing in paragraph (b) of this section. However, payment shall not be made prior to that date without the written consent of the Agreement Officer.
 - (e) The recipient is not entitled to partial payment for partial completion of a payment milestone.
 - (f) Unless approved by the Agreement Officer, all preceding payment milestones must be completed before payment can be made for the next payment milestone.
 - (g) (i) If the Recipient is authorized to submit invoices directly to the NASA paying office, the original invoice should be submitted to:

NASA/Goddard Space Flight Center
Cost and Commercial Accounts Department
Code 155/Bldg 18
Greenbelt, MD 20771
 - (ii) If the Recipient is not authorized to submit invoices directly to the NASA paying office, the original invoice should be submitted to the Agreement Officer for certification.

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(iii) Copies of the recipient's invoice should be submitted to the following offices:

- (A) Copy 1 - NASA Agreement Officer.
- (B) Copy 2 - Auditor.
- (C) Copy 3 - Contract administration office.
- (D) Copy 4 - Project management office.
- (E) Copy 5 - Other recipients as designated by the Agreement Officer.

***To be completed at award**

[End of Provision]

§ 1274.909 TERM OF AGREEMENT (JULY 2002)

- (a) The agreement commences on the effective date indicated on the attached cover sheet and continues until the expiration date indicated on the attached cover sheet unless terminated by either party. If all resources are expended prior to the expiration date of the agreement, the parties have no obligation to continue performance and may elect to cease at that point. The parties may extend the expiration date if additional time is required to complete the milestones at no increase in Government resources. Requests for approval for no-cost extensions must be forwarded to the NASA Agreement Officer no later than ten days prior to the expiration of the award to be considered.
- (b) Provisions of this Agreement, which, by their express terms or by necessary implication, apply for periods of time other than that specified as the agreement term, shall be given effect, notwithstanding expiration of the term of the agreement.

[End of Provision]

§ 1274.925 SUBCONTRACTS (JULY 2002)

- (a) Recipients are not authorized to issue grants or cooperative agreements.
- (b) NASA Agreement Officer consent is required for all subcontracts.
- (c) If not submitted by the Recipient and accepted by NASA in the original proposal. The Recipient shall provide the following information to the Agreement Officer:
 - (1) A copy of the proposed subcontract.
 - (2) Basis for subcontractor selection.
 - (3) Justification for lack of competition when competitive bids or offers are not obtained.
 - (4) Basis for award cost or award price.
- (d) The Recipient shall utilize small business, veteran-owned small business, service-disabled veteran-owned small business, historically underutilized small business, small disadvantaged business, women-owned business concerns, Historically Black Colleges

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and Universities, and minority educational institutions as subcontractors to the maximum extent practicable.

(e) All entities that are involved in performing the research and development effort that is the purpose of the cooperative agreement shall be part of the Recipient's consortium and not subcontractors.

[End of Provision]

**§ 1274.933 SUMMARY OF RECIPIENT REPORTING
RESPONSIBILITIES (JULY 2002)**

This cooperative agreement requires the recipient to submit a number of reports. These reporting requirements are summarized below. In the event of a conflict between this provision and other provisions of the cooperative agreement requiring reporting, the other provisions take precedence.

Report	Frequency	Reference
Report of Joint NASA/Recipient Inventions	As required	1274.911 Patent Rights (Paragraph (b)(4))
Interim Report of Reportable Items	Every 12 months	1274.912 Patent Rights - Retention by the Recipient (Large Business) (Paragraph (e)(3)(i))
Final Report of Reportable Items	3 months after completion	1274.912 Patent Rights - Retention by the Recipient (Large Business) (Paragraph (e)(3)(ii))
Disclosure of Subject Inventions	Within 2 months after inventor discloses it to Recipient	1274.912 Patent Rights Retention by the Recipient (Large Business) (Paragraph (e)(2)) or 1274.913 Patent Rights - Retention by the Recipient (Small Business) (Paragraph (c)(1))
Election of Title to a Subject Invention	1 year after disclosure of the subject invention if a statutory bar exists, otherwise within 2 years	1274.913 Patent Rights - Retention by the Recipient (Small Business) (Paragraph (c)(2))
Listing of Subject Inventions	Every 12 months from the date of the agreement	1274.913 Patent Rights - Retention by the Recipient (Small Business) (Paragraph (f)(5)(i))
Subject Inventions Final Report	Prior to close-out of the	1274.913 Retention by the

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	agreement	Recipient (Small Business) (Paragraph (f)(5)(ii))
Notification of Decision to Forego Patent Protection	30 days before expiration of the response period	1274.913 Patent Rights - Retention by the Recipient (Small Business) (Paragraph (f)(3))
Notification of a Subcontract Award	Promptly upon award of a subcontract	1274.912 Patent Rights - Retention by the Recipient (Large Business) (Paragraph (g)(3)) or 1274.913 Patent Rights - Retention by the Recipient (Small Business) (Paragraph (g)(3))
Utilization of Subject Invention	Annually	1274.913 Patent Rights - Retention by the Recipient (Small Business) (Paragraph (h))
Notice of Proposed Transfer of Technology	Prior to transferring technology to foreign firm or institution	1274.915 Restrictions on Sale or Transfer of Technology to Foreign Firms or Institutions (Paragraph (b))
Progress Report	60 days prior to the anniversary date of the agreement (except final year)	1274.921 Publications and Reports: Non-Proprietary Research Results (Paragraph (d)(1))
Summary of Research	90 days after completion of agreement	1274.921 Publications and Reports: Non-Proprietary Research Results (Paragraph (d)(2))
NASA Form 1018 Property in the Custody of Contractors	Annually by October 15	1274.923 Equipment and Other Property (Paragraph (f))
NASA Form 1018 Property in the Custody of Contractors	60 days after expiration date of agreement	1274.923 Equipment and Other Property (Paragraph (f))

§ 1274.934 SAFETY (JULY 2002)

NASA's safety priority is to protect: (1) the public, (2) astronauts and pilots, (3) the NASA workforce (including contractor employees working on NASA contracts), and (4) high-value equipment and property.

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- a) The Recipient shall act responsibly in matters of safety and shall take all reasonable safety measures in performing under this cooperative agreement. The recipient shall comply with all applicable federal, state, and local laws relating to safety. The Recipient shall maintain a record of, and will notify the NASA Agreement Officer immediately (within one workday) of any accident involving death, disabling injury or substantial loss of property. The Recipient will immediately (within one workday) advise NASA of hazards that come to its attention as a result of the work performed.
- b) Where the work under this cooperative agreement involves flight hardware, the hazardous aspects, if any, of such hardware will be identified, in writing, by the Recipient. Compliance with this provision by subcontractors shall be the responsibility of the Recipient.

[End of Provision]

§ 1274.936 BREACH OF SAFETY OR SECURITY (JULY 2002)

Safety is the freedom from those conditions that can cause death, injury, occupational illness, damage to or loss of equipment or property, or damage to the environment. Safety is essential to NASA and is a material part of this contract. NASA's safety priority is to protect: (1) the public; (2) astronauts and pilots; (3) the NASA workforce (including contractor employees working on NASA contracts); and (4) high-value equipment and property. A major breach of safety by the Recipient entitles the Government to remedies (pending corrective measures by the Recipient) which includes, suspension or termination of the Cooperative Agreement, require removal or change of Recipient's personnel from performing under the Agreement. A major breach of safety must be related directly to the work on the Agreement. A major breach of safety is an act or omission of the Recipient that consists of an accident, incident, or exposure resulting in a fatality or mission failure; or in damage to equipment or property equal to or greater than \$1 million; or in any "willful" or "repeat" violation cited by the Occupational Safety and Health Administration (OSHA) or by a state agency operating under an OSHA approved plan.

- (a) Security is the condition of safeguarding against espionage, sabotage, crime (including computer crime), or attack. A major breach of security by the Recipient entitles the Government to remedies (pending corrective measures by the Recipient) which includes, suspension or termination of the Cooperative Agreement, require removal or change of Recipient's personnel from performing under the Cooperative Agreement. A major breach of security may occur on or off Government installations, but must be related directly to the work on the Cooperative Agreement. A major breach of security may arise from any of the following: compromise of classified information; illegal technology transfer; workplace violence resulting in

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criminal conviction; sabotage; compromise or denial of information technology services; damage or loss greater than \$250,000 to the Government; or theft.

(b) In the event of a major breach of safety or security, the Recipient shall report the breach to the Agreement Officer. If directed by the Agreement Officer, the Recipient shall conduct its own investigation and report the results to the Government. The Recipient shall cooperate with the Government investigation, if conducted.

[End of Provision]

**§ 1274.937 SECURITY REQUIREMENTS FOR UNCLASSIFIED
INFORMATION TECHNOLOGY RESOURCES (JULY 2002)**

- (a) The Recipient shall be responsible for Information Technology security for all systems connected to a NASA network or operated by the Recipient for NASA, regardless of location. This provision is applicable to all or any part of the cooperative agreement that includes information technology resources or services in which the Recipient must have physical or electronic access to NASA's sensitive information contained in unclassified systems that directly support the mission of the Agency. This includes information technology, hardware, software, and the management, operation, maintenance, programming, and system administration of computer systems, networks, and telecommunications systems. Examples of tasks that require security provisions include:
- (1) Computer control of spacecraft, satellites, or aircraft or their payloads;
 - (2) Acquisition, transmission or analysis of data owned by NASA with significant replacement cost should the Recipient's copy be corrupted; and
 - (3) Access to NASA networks or computers at a level beyond that granted the general public, e.g. bypassing a firewall.
- (b) The Recipient shall provide, implement, and maintain an IT Security Plan. This plan shall describe the processes and procedures that will be followed to ensure appropriate security of IT resources that are developed, processed, or used under this cooperative agreement. The plan shall describe those parts of the cooperative agreement to which this provision applies. The Recipient's IT Security Plan shall be compliant with Federal laws that include, but are not limited to, the Computer Security Act of 1987 (40 U.S.C. 1441 et seq.) and the Government Information Security Reform Act of 2000. The plan shall meet IT security requirements in accordance with Federal and NASA policies and procedures that include, but are not limited to:
- (c) Within 30 days after cooperative agreement award, the Recipient shall submit for NASA approval an IT Security Plan. This plan must be consistent with and further detail the approach contained in the Recipient's proposal that resulted in the award of this cooperative agreement and in compliance with the requirements stated in this

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provision. The plan, as approved by the Agreement Officer, shall be incorporated into the cooperative agreement as a compliance document.

- (d)(1) Recipient personnel requiring privileged access or limited privileged access to systems operated by the Recipient for NASA or interconnected to a NASA network shall be screened at an appropriate level in accordance with NPG 2810.1, Section 4.5; NPG 1620.1, Chapter 3; and paragraph (d)(2) of this provision. Those Recipient personnel with non-privileged access do not require personnel screening. NASA shall provide screening using standard personnel screening National Agency Check (NAC) forms listed in paragraph (d)(3) of this provision, unless Recipient screening in accordance with paragraph (d)(4) is approved. The Recipient shall submit the required forms to the NASA Center Chief of Security (CCS) within fourteen (14) days after cooperative agreement award or assignment of an individual to a position requiring screening. The forms may be obtained from the CCS. At the option of the government, interim access may be granted pending completion of the NAC.
- (2) Guidance for selecting the appropriate level of screening is based on the risk of adverse impact to NASA missions. NASA defines three levels of risk for which screening is required (IT-1 has the highest level of risk):
- (i) IT-1 -- Individuals having privileged access or limited privileged access to systems whose misuse can cause very serious adverse impact to NASA missions. These systems include, for example, those that can transmit commands directly modifying the behavior of spacecraft, satellites or aircraft.
 - (ii) IT-2 -- Individuals having privileged access or limited privileged access to systems whose misuse can cause serious adverse impact to NASA missions. These systems include, for example, those that can transmit commands directly modifying the behavior of payloads on spacecraft, satellites or aircraft; and those that contain the primary copy of "level 1" data whose cost to replace exceeds one million dollars.
 - (iii) IT-3 -- Individuals having privileged access or limited privileged access to systems whose misuse can cause significant adverse impact to NASA missions. These systems include, for example, those that interconnect with a NASA network in a way that exceeds access by the general public, such as bypassing firewalls; and systems operated by the Recipient for NASA whose function or data has substantial cost to replace, even if these systems are not interconnected with a NASA network.
- (3) Screening for individuals shall employ forms appropriate for the level of risk as follows:
- (i) IT-1: Fingerprint Card (FC) 258 and Standard Form (SF) 85P, Questionnaire for Public Trust Positions;
 - (ii) IT-2: FC 258 and SF 85, Questionnaire for Non-Sensitive Positions; and

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- (iii) IT-3: NASA Form 531, Name Check, and FC 258.
- (4) The Agreement Officer may allow the Recipient to conduct its own screening of individuals requiring privileged access or limited privileged access provided the Recipient can demonstrate that the procedures used by the Recipient are equivalent to NASA's personnel screening procedures. As used here, equivalent includes a check for criminal history, as would be conducted by NASA, and completion of a questionnaire covering the same information as would be required by NASA.
- (5) Screening of Recipient personnel may be waived by the Agreement Officer for those individuals who have proof of --
- (i) Current or recent national security clearances (within last three years);
 - (ii) Screening conducted by NASA within last three years; or
 - (iii) Screening conducted by the Recipient, within last three years, that is equivalent to the NASA personnel screening procedures as approved by the Agreement Officer under paragraph (d)(4) of this provision.
- (e) The Recipient shall ensure that its employees, in performance of the cooperative agreement, receive annual IT security training in NASA IT Security policies, procedures, computer ethics, and best practices in accordance with NPG 2810.1, Section 4.3 requirements. The Recipient may use web-based training available from NASA to meet this requirement.
- (f) The Recipient shall afford NASA, including the Office of Inspector General, access to the Recipient's, subcontractors' or subawardees' facilities, installations, operations, documentation, databases and personnel used in performance of the cooperative agreement. Access shall be provided to the extent required to carry out a program of IT inspection, investigation and audit to safeguard against threats and hazards to the integrity, availability and confidentiality of NASA data or to the function of computer systems operated on behalf of NASA, and to preserve evidence of computer crime.
- (g) The Recipient shall incorporate the substance of this clause in all subcontracts or subagreements that meet the conditions in paragraph (a) of this provision.

[End of Provision}

§ 1274.938 MODIFICATIONS (JULY 2002)

During the term of this agreement and in the interest of achieving program objectives, the parties may agree to changes that affect the responsibility statements, milestones, or other provisions of this agreement. Any changes to this agreement will be accomplished by a written bilateral modification.

[End of Provision]

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**§ 1274.939 APPLICATION OF FEDERAL, STATE, AND LOCAL
LAWS AND REGULATIONS (JULY 2002)**

- (a) *Federal Laws and Regulations.* This Cooperative Agreement shall be governed by the Federal Laws, regulations, policies, and related administrative practices applicable to this Cooperative Agreement on the date the Agreement is executed. The Recipient understands that such Federal laws, regulations, policies, and related administrative practices may be modified from time to time. The Recipient agrees to consider modifying this Agreement to be governed by those later modified Federal laws, regulations, policies, and related administrative practices that directly affect performance of the Project.
- (b) *State or Territorial Law and Local Law.* Except to the extent that a Federal statute or regulation preempts State or territorial law, nothing in the Cooperative Agreement shall require the Recipient to observe or enforce compliance with any provision thereof, perform any other act, or do any other thing in contravention of any applicable State or territorial law; however, if any of the provisions of the Cooperative Agreement violate any applicable State or territorial law, or if compliance with the provisions of the Agreement would require the Recipient to violate any applicable State or territorial law, the Recipient agrees to notify the Government (NASA) immediately in writing in order that the Government and the Recipient may make appropriate arrangements to proceed with the Project as soon as possible.
- (c) *Changed Conditions of Performance (Including Litigation).* The Recipient agrees to notify the Government (NASA) immediately of any change in State or local law, conditions, or any other event that may significantly affect its ability to perform the Project in accordance with the terms of this Cooperative Agreement. In addition, the Recipient agrees to notify the Government (NASA) immediately of any decision pertaining to the Recipient's conduct of litigation that may affect the Government's interests in the Project or the Government's administration or enforcement of applicable Federal laws or regulations. Before the Recipient may name the Government as a party to litigation for any reason, the Recipient agrees to inform the Government; this proviso applies to any type of litigation whatsoever, in any forum.
- (d) *No Government Obligations to Third Parties.* Absent the Government's express written consent, and notwithstanding any concurrence by the Government in or approval of the award of any Agreement of the Recipient (third party contract) or subcontract of the Recipient (third party subcontract) or the solicitation thereof, the Government shall not be subject to any obligations or liabilities to third party contractors or third party subcontractors or any other person(s).

[End of Provision]

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§ 1274.940 CHANGES IN RECIPIENT'S MEMBERSHIP (JULY 2002)

The Recipient shall notify the cognizant Agreement Officer within seven (7) days of any change in the corporate membership (ownership) structure of the Recipient, including the addition or withdrawal of any of the Recipient's affiliated members (e.g., Consortium Member). If NASA reasonably determines that any change in the corporate membership (ownership) of Recipient will conflict with NASA's objectives for this Project or any statutory or regulatory restriction applicable to the agency, NASA may terminate this Agreement after giving the Agreement Recipient at least ninety (90) days prior written notice of such perceived conflict and a reasonable opportunity to cure such conflict.

[End of Provision]

§ 1274.942 EXPORT LICENSES (JULY 2002)

- (a) The Recipient shall comply with all U.S. export control laws and regulations, including the International Traffic in Arms Regulations (ITAR), 22 CFR Parts 120 through 130, and the Export Administration Regulations (EAR), 15 CFR Parts 730 through 799, in the performance of this Cooperative Agreement. In the absence of available license exemptions/exceptions, the Recipient shall be responsible for obtaining the appropriate licenses or other approvals, if required, for exports of hardware, technical data, and software, or for the provision of technical assistance.
- (b) The Recipient shall be responsible for obtaining export licenses, if required, before utilizing foreign persons in the performance of this Cooperative Agreement, including instances where the work is to be performed on-site at NASA Goddard Space Flight Center, where the foreign person will have access to export-controlled technical data or software.
- (c) The Recipient shall be responsible for all regulatory record keeping requirements associated with the use of licenses and license exemptions/exceptions.
- (d) The Recipient shall be responsible for ensuring that the requirements of this provision apply to its subcontractors.
- (e) The Recipient may request, in writing, that the Agreement Officer authorize it to export ITAR-controlled technical data (including software) pursuant to the exemption at 22 CFR 125.4(b)(3). The Agreement Officer or designated representative may authorize or direct the use of the exemption where the data does not disclose details of the design, development, production, or manufacture of any defense article.

[End of Provision]

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IV. ADDITIONAL TERMS

1. REPORT REQUIREMENTS

To ensure collection of systemic evaluation data on each project, basic reporting is required. The milestones above in 1 entitled "Milestone Requirements" measure progress toward one or more of the NASA Education Priorities. In addition to those reporting requirements found in §1274.933 entitled "Summary of Recipient Reporting Responsibilities (July 2002), the following reports shall be delivered:

Each fiscal quarter, provide financial reports and updates on project activities.

A quarterly review of a project shall be held via videoconferencing or teleconferencing, with the LEARNERS Manager, Learning Technologies Project Manager, the Educational Technology Program Officer, and other personnel, as invited by Educational Technology Program Management.

An annual summary report and demonstration of the product is required. All projects shall be reviewed annually to determine their progress measured against their milestones.

These reports shall include at least one representative picture or illustration and provide descriptive text under the following topics:

- Title of the agreement and agreement number
 - Period covered by the report
 - Objective
 - Approach
 - Scientific Accomplishments
 - Technology Accomplishments (including progress toward milestones)
 - Status/Plans
 - Point of contact (name, address, email)
 - Caption for the graphic
 - List (and abstracts) of all publications which cite work performed under this cooperative agreement, identifying which were refereed. If any publication is available on the Web, link from the publication reference to the publication site.
 - List of conference presentations resulting from work performed under this cooperative agreement.
 - Lists of all other media references in which the research was discussed.
 - List of any patents filed or new technology reports resulting from work under this cooperative agreement.

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2. MEETING PARTICIPATION REQUIREMENTS

To foster communication within the program, the following participation is required:

1. Learning Technologies Investigators kick-off meeting.
2. Annual NASA Education Technology Program conference held in Spring, generally between months of April – May.
3. Training workshops for NASA internal dissemination channels, including but not limited to the Education Resource Center Network and the Aerospace Education Specialists Program.

3. SOFTWARE SUBMISSION CRITERIA

Recipients may release their software by posting that software to their own world-wide-web addresses. There is no requirement that NASA provide approval of this recipient release prior to its being posted. However, the recipients must make these releases in a manner consistent with this agreement. Specifically, any assertion of data rights or patent rights by the recipients must be in accordance with clauses 1274.911-913 of this agreement. In addition, the recipients are responsible for complying with all export control laws.

Recipients are required to assist NASA in obtaining approval for posting software to a NASA web site.

The recipient shall include a completed NASA Form 1679 (“Disclosure of Invention and New Technology (Including Software)”) with each software submission. All submissions of software under this cooperative agreement shall contain the following legend:

“This software is designated for public release under NASA Cooperative Agreement Number NCC_____ and may be publicly released after approval for release has been granted by GSFC Software Release Official.”

All software submissions shall be made to the National HPCC Software Exchange (NHSE). All submissions shall, at a minimum, meet the "checked" category criteria, as described at the NHSE URL (<http://www.nhse.org>; “HPCC Software and Enabling Technology; NHSE Software Catalog; Explanation of review procedures; Scope, completeness, and documentation guidelines”).

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4. PERIOD OF PERFORMANCE

The Period of Performance of this agreement shall commence on the effective date indicated on the attached cover sheet and shall continue until the completion date indicated on the attached cover sheet.

5. ADMINISTRATION AND AUDIT RESPONSIBILITY

Agreements Office: [NASA, Goddard Space Flight Center](#)
Earth Sciences Procurement Office
Attn: Lynne Hoppel/210.Y
Building 28, Room W115
Greenbelt Road
Greenbelt, MD 20711

GRANT/AGREEMENT/CONTRACTING OFFICER:

_____ Lynne Hoppel
([301](#)) 286-3035
Lynne.C.Hoppel@nasa.gov

Recipient Address and Point of Contact: [*](#)

GOVERNMENT AUDIT AGENCY: [*](#)

The Payment Office: Cost and Commercial Accounts Department, Code 155.
[Goddard Space Flight Center](#)
[Greenbelt, MD 20771](#)

[*To be completed at award](#)

6. SCHEDULE OF MILESTONES, DUE DATES AND MILESTONE PAYMENTS

[\(A schedule substantially similar to the following shall be included in each final cooperative agreement with applicable information filled in. The order of the milestones shall be negotiated prior to award of the cooperative agreement\)](#)

**TABLE 1 – Chronological Schedule of Milestones, Due Dates and Advance
Payments**

Mile- stone #	Mile- stone Label	Milestone Title <followed by statement of milestone>	Expected Completion Date	Milestone Payment Amount
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<#>	<#>	<statement of milestone>	<date>	<\$>
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Key:

<#>: Chronological sequence number. The order of these milestones is negotiable, prior to award.

<date>: Expected milestone completion date, to be proposed by offeror and negotiated.

<\$>: Cost to complete milestone, to be proposed by offeror and negotiated.

**7. §1260.68 PAYMENTS UNDER GRANTS WITH COMMERCIAL
FIRMS (OCTOBER 2000)**

(a) Invoices for payment of actual incurred costs shall be submitted by the Recipient no more frequently than on a quarterly basis.

(b) Invoices shall be submitted by the Recipient to the following offices:

(1) The original invoice shall be sent directly to the payment office designated on the grant cover page.

(2) Copies of the invoice shall be sent to the NASA Technical Officer and NASA Grant Officer.

(c) All invoices shall reference the grant number.

(d) The final invoice shall be marked "Final" and shall be submitted within 90 days of the expiration of the grant.

(e) The requirements set forth in this special condition supercedes grant provision § 1260.26, Financial Management.

**V. ATTACHMENTS TO THIS COOPERATIVE
AGREEMENT**

The following is a list of attachments made to this cooperative agreement:

Attachment No.	Attachment Title	Date of Attachment
1	IT Security Plan	*

*To be determined at award

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Appendix G

Instructions for Notice of Intent to Propose

G.1 Proposal Submission Process

G.1.1 LETTER OF INTENT

A Letter of Intent (LOI) to submit a proposal in response to this Cooperative Agreement Notice is required. LOI's are to be submitted electronically by entering the requested information through the SYS-EYFUS Web site located at: <http://proposals.hq.nasa.gov/proposal.cfm> .

i) User Identifications (User ID)

- User ID and passwords are required by NASA security policies in order to access the SYS-EYFUS Web site. Prospective PI's can check if they have a SYS-EYFUS User ID and Password by going to <http://proposals.hq.nasa.gov/proposal.cfm> and performing the following steps:
- Click the hyperlink for NEW USER; this will take the user to the personal information Search Page.
- Enter the user's first and last name. SYS-EYFUS will search for matching record information in the SYS-EYFUS database.
 - If matches are found, select the "correct" record from those displayed and then click on CONTINUE.
 - If no exact match is found, select NONE OF THE ABOVE click on CONTINUE. Then complete the NEW USER form. Follow the on-line instructions for updating and/or entering new data. In addition, to adding general contact information, areas of interest and expertise are required.
 - If no match is found, select ADD RECORD. Follow the on-line instructions for updating and/or entering new data. In addition, to adding general contact information, areas of interest and expertise are required.

A User ID and password will be emailed to you.

With the user ID and password, login to the SYS-EYFUS web site and follow the instructions for NEW NOTICE OF INTENT.

As a minimum, the following information will be requested:

- CAN number, alpha-numeric identifier, (Note: this may be included on the Web site template);

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- The Principal Investigator's name, mailing address, phone number, and email address;
- The name(s) of any Co-Investigator(s) and institution(s) known by the LOI due date;
- The relevant NASA Enterprise;
- Scope of Technology: The relevant LTP Pillar;
- A descriptive title of the intended investigation; and,
- A brief (200-300 word) description of the investigation to be proposed.

A separate NOI must be submitted for each intended proposal. Note that this NOI may also be the preliminary version of the proposal *Cover Page/Proposal Summary*; if so, the Web site provides the user future access to update this information for the final *Cover Page/Proposal Summary* as the deadline for submission of the final proposal approaches.

Appendix H

**“Sample” Transmittal Letter to Accompany Present/Past Performance
Questionnaire
(note the offerors are responsible for ensuring completion and delivery of completed
questionnaires by the proposal due date specified in the CAN)**

MEMORANDUM FOR:

FROM:

SUBJECT: Present/Past Performance Questionnaire

NASA Goddard Space Flight Center’s (GSFC’s) has released a Cooperative Agreement Notice (CAN) for the purpose of incorporating current research on teaching and learning with technology to achieve meaningful utilization of innovative and immersive technology in the learning environment. This investigation is expected to efficiently develop world-class educational products that are poised for the widest possible market diffusion, that inspire and educate, that use innovative methods or emerging technologies, and that clearly address educational standards utilizing NASA data. NASA seeks products that enhance the ability to represent NASA missions and activities as virtual experiences, engaging and immersing the learner in as much of a sensory experience as relates to an effective learning experience.

As part of NASA’s evaluation process for past performance NASA has requested interested participants to make the request of their customers to complete a questionnaire to help NASA assess the Offeror’s experience and relevancy of work performed as compared to our requirement. As one of our customers your completion and submission to NASA GSFC of this questionnaire is greatly appreciated.

Please complete the questionnaire in a timeframe allowing delivery to NASA GSFC on or before _____.

I will be contacting you for completion status of this questionnaire. A hardcopy or an email reply to the questionnaire should be forwarded to:

NASA Goddard Space Flight Center
Attn: Lynne Hoppel
Code 210.Y
Greenbelt Road
Greenbelt, MD 20771
Lynne.C.Hoppel@nasa.gov

Thank you for your timely assistance.

Cordially,

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Cooperative Agreement Notice (CAN) No. CAN-03-LTP-01

Past Performance “FACTS Sheet”

Background Information (for person filling out the survey):

First Name:	
Last Name:	
Rank:	
Title:	
Organization:	
Phone:	
Fax:	
E-Mail Address:	

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Past Performance “FACTS Sheet”

Past Performance Involvement (name of organization submitting proposal to CAN)

Company:					
Division:					
Agreement No.					
Dollar Value:	\$				
Work:	Complete <input type="checkbox"/>	Ongoing <input type="checkbox"/>			
Award date:					
Description of Support:					
Target Cost:	On <input type="checkbox"/>	Above <input type="checkbox"/>	Below <input type="checkbox"/>	By:	%
Schedule:	On <input type="checkbox"/>	Ahead <input type="checkbox"/>	Behind <input type="checkbox"/>	By:	Months

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Adjectival Rating “FACTS Sheet”

Based on your knowledge of the project identified on page 3, please provide your assessment of how well the contractor performed on each of the following questions. It is very important to keep in mind that only performance within the *past five years* is relevant. If you cannot answer any questions, please indicate with “N/A.”

Please use the adjectival ratings in response as follows:

Excellent	Of exceptional merit; exemplary performance in a timely, efficient, and economical manner; very minor (if any) deficiencies with no adverse effect on overall performance.
Very Good	Very effective performance, fully responsive to contract requirements; contract requirements accomplished in a timely, efficient, and economical manner for the most part; only minor deficiencies.
Good	Effective performance; fully responsive to contract requirements; reportable deficiencies, but with little identifiable effect on overall performance.
Fair	Meets or slightly exceeds minimum acceptable standards; adequate results; reportable deficiencies with identifiable, but not substantial, effects on overall performance.
Poor	Does not meet minimum acceptable standards in one or more areas; remedial action required in one or more areas; deficiencies in one or more areas which adversely affect overall performance.

Your participation is appreciated by NASA Goddard Space Flight Center. Should you have any questions, please feel free to contact Lynne Hoppel at Lynne.C.Hoppel@nasa.gov

Technical Past Performance "FACTS Sheet"

Technical Performance:

A. Brief description of the effort performed by this contractor:

B. Overall performance in planning and controlling the program.

Rating: ()Excellent ()Very Good ()Good ()Fair () Poor

Comments: _____

B. Quality of services and support provided.

Rating: ()Excellent ()Very Good ()Good ()Fair () Poor

Comments: _____

C. Compliance with technical requirements and performance standards:

Rating: ()Excellent ()Very Good ()Good ()Fair ()Poor

Comments: _____

D. Initiative in identifying and resolving unforeseen technical problems (causes, impacts, and resolutions)

Rating: ()Excellent ()Very Good ()Good ()Fair () Poor

Comments: _____

E. Initiative in identifying and resolving unforeseen schedule problems (causes, impacts, and resolutions)

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Rating: ☐ Excellent ☐ Very Good ☐ Good ☐ Fair ☐ Poor

Comments: _____

Technical Past Performance “FACTS Sheet”

F. Ability to design and/or delivery a product that meets or exceeds performance requirements within costs.

Rating: ☐ Excellent ☐ Very Good ☐ Good ☐ Fair ☐ Poor

Comments: _____

G. Contractor’s ability to correct performance deficiencies.

Rating: ☐ Excellent ☐ Very Good ☐ Good ☐ Fair ☐ Poor

Comments: _____

H. Contractor timeliness in correcting identified performance deficiencies.

Rating: ☐ Excellent ☐ Very Good ☐ Good ☐ Fair ☐ Poor

Comments: _____

Program Management Past Performance “FACTS Sheet”

Program Management

A. Identification, surveillance and management of major/critical subcontractors.

Rating: ()Excellent ()Very Good ()Good ()Fair ()Poor

Comments: _____

B. Ability to build effective working relationships with associate contractors, subcontractors and the Government in a team environment.

Rating: ()Excellent ()Very Good ()Good ()Fair ()Poor

Comments: _____

C. Ability to use metrics and other tools to accurately measure and track accomplishments.

Rating: ()Excellent ()Very Good ()Good ()Fair ()Poor

Comments: _____

D. Ability to provide qualified manpower to fulfill schedule requirements.

Rating: ()Excellent ()Very Good ()Good ()Fair ()Poor

Comments: _____

E. Ability to effectively plan efforts, provide realistic cost and schedule estimates, etc.

Rating: ()Excellent ()Very Good ()Good ()Fair ()Poor

Comments: _____

Agreement Management Past Performance "FACTS Sheet"
--

Agreement Management

A. What is the Agreement Value:

Cost Type Arrangement:

	Initial Value	Current Value
Estimated Cost:	\$ _____	\$ _____
Fee:	\$ _____	\$ _____

Or

Fixed Price:	\$ _____	\$ _____
---------------------	----------	----------

Briefly describe any change from original agreement value: _____

B. Adherence to estimated costs and agreement cost targets

Rating: () Excellent () Very Good () Good () Fair () Poor

Comments: _____

C. Was there a cost overrun? () Yes () No

If yes, please explain:

D. Ability to submit accurate financial reports and/or credible forecasts of future program.

Rating: () Excellent () Very Good () Good () Fair () Poor

Comments: _____

E. Would you select this Source Again? () Yes () No

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Rater's Signature Date